#1134768072 ID:88064836

TN
859
.C64
no.2
Sect.2.3
1975
v.1

FIRST QUARTERLY DATA REPORT
FOR THE
TERRESTRIAL BASELINE DATA ACCUMULATION PROGRAM
RIO BLANCO OIL SHALE PROJECT

submitted to

RIO BLANCO OIL SHALE PROJECT
Denver, Colorado

from

ECOLOGY CONSULTANTS, INCORPORATED
Fort Collins, Colorado

March 1975

QUARTERLY REPORT CONTRIBUTERS

Administration

Robert Macgregor - Harvard University, M.A. in Zoology. Final review.

James States - Oregon State University, Ph.D. in Animal Ecology and Ethology. Project Manager and principal reviewer.

W. Thomas Turner - Colorado State University, M.S. in Zoology (Terrestrial Ecology). Terrestrial coordinator/ responsible for report preparation.

Special Expertise

James Baker - Colorado State University, B.S. in Zoology. Responsible for winter track count report section.

John Cancalosi - Colorado State University, B.S. in Zoology. Responsible for reptile and amphibian report section.

Stephen Ellinwood - Colorado State University, B.S. in Zoology. Responsible for vegetation data preparation.

Edmund Kelley - University of New Mexico, M.S. in Plant Ecology. Report sections on soils and vegetation methods and materials.

Bruce King - Colorado State University, B.S. in Bioscience. Responsible for invertebrate report section.

Craig Kling - North Dakota State University, B.A. in Wildlife Biology. Responsible for big game and domestic livestock report sections.

David Koehler - University of New Mexico, M.S. in Range Ecology. Responsible for report section on grazing exclosures.

David Laux - University of Wisconsin, M.S. in Landscape Architecture. Responsible for remote sensing report section.

Richard McGuire - University of South Florida, M.A. in Zoology. Responsible for small mammal and vegetation data interpretation.

Germaine Reyes - Colorado State University, B.S. in Zoology. Responsible for small mammal stomach analysis report section.

Robert Sanz - Colorado State University, B.S. in Zoology. Responsible for mammalian predator report section.

Dennis Van Horn - University of Washington, B.S. in Zoology. Responsible for avifauna report section.

2.3. TERRESTRIAL PROGRAMS

2.3.0. Introduction and Summary

This is the first quarterly report for the Terrestrial Baseline Data Accumulation Program on Tract C-a. Its purpose is to transmit information gathered during the period from initiation of the program in October, 1974 to February 28, 1975. For each element of the terrestrial program (such as vegetation, or small mammals) a detailed description of field and laboratory methodology is included. For those programs which have been initiated during this "quarter" the results, including raw and summarized data, discussion of results and preliminary interpretations are also included. To permit the easy acquisition of raw data by personnel from both Rio Blanco Oil Shale Project (RBOSP) and Ecology Consultants, Inc. (ECI) the data are organized in an appendix according to ECI's filing system. All data sheets within each filing category are numbered and this number, prefixed by the appropriate file number, is shown in the upper right hand corner of the sheet. Raw data in subsequent quarterly reports will be appended to data from the first quarter and serially numbered for incorporation into the accumulating data base.

Because few definitive ecological trends are identifiable from the data obtained in just one quarter, complete statistical analyses and interpretations of results are not included. Significant facts, trends, or comparisons evident from the summarized data will be presented, but possible interpretations of their ecological significance are regarded as only tentative, subject to revision in future quarterly reports on the basis of new information contained therein.

Ecology Consultants, Incorporated has been contracted to perform a Terrestrial Baseline Data Accumulation Program for Rio Blanco Oil Shale Project on Tract C-a. Communication of the scope and results of that program will be accomplished in a series of quarterly reports. This first report of that series contains details of methodology, summarized results, preliminary interpretations, and appended raw data for the period October 1974 through February 1975. Future Quarterly Reports will include an update of the developing data base for each subsequent quarter as well as any approved program modifications. Definitive interpretations and a synthesis of program results will be developed in the Second Annual Report which is due in December, 1975.

2.3.1. VEGETATION

2.3.1.1. INTRODUCTION

Vegetation investigations are designed to quantitatively and qualitatively describe the major vegetational types, to help identify and map the distribution of the major types, and to collect and identify plant voucher specimens. These investigations provide reliable quantitative and qualitative phytosociological information that serves as a basis for understanding local ecosystem structure and provides a foundation for future comparative studies on Tract C-a and the surrounding area.

2.3.1.2. METHODS AND MATERIALS

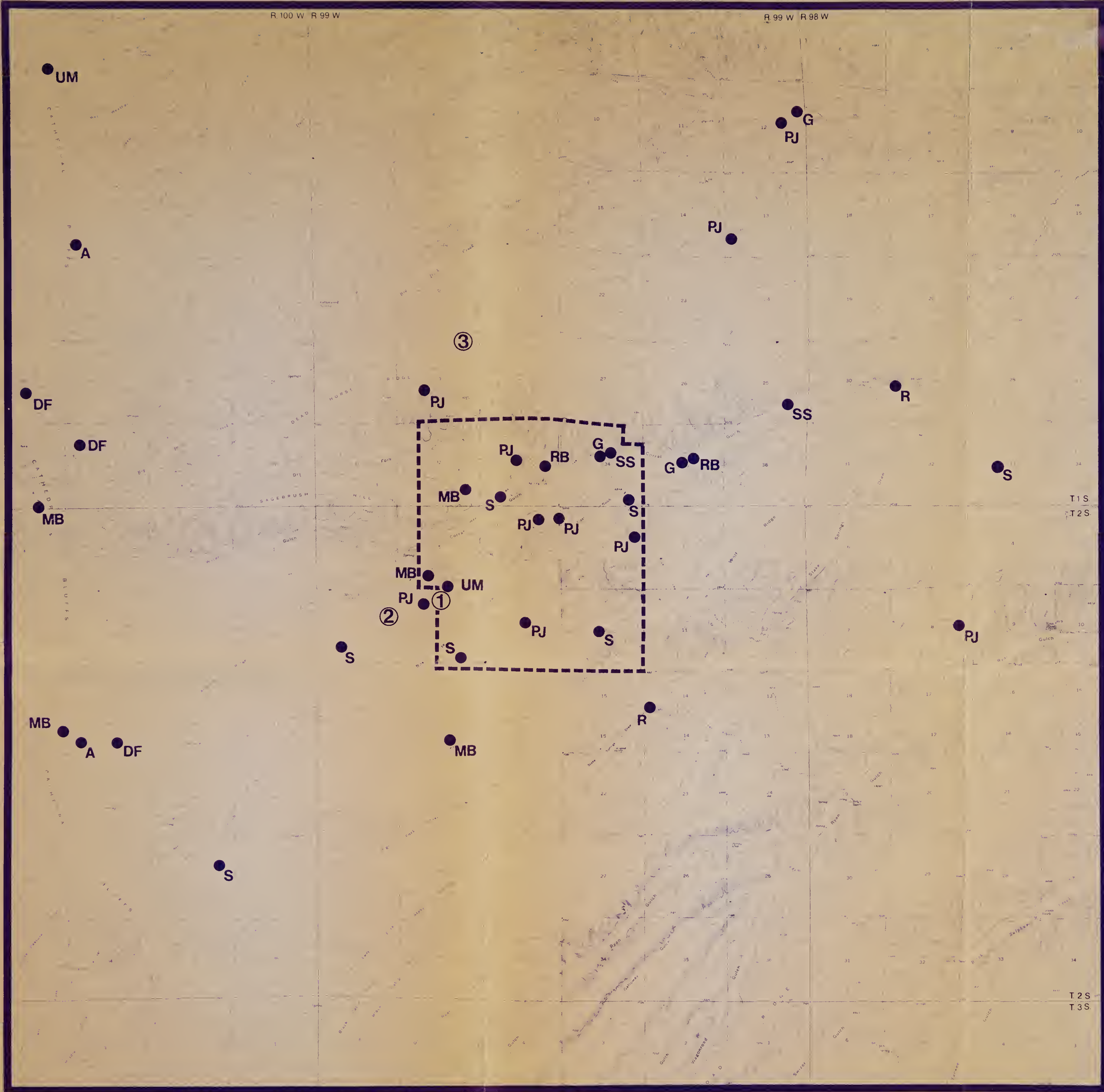
2.3.1.2.1. Phytosociological Investigations

Aerial photographs and pertinent literature were used to identify the major vegetation types on and adjacent to Tract C-a. A preliminary selection of sampling locations in each type was made from aerial photographs to assure good coverage of the entire area and to insure access along existing roads and trails. Locations having two or more vegetation types in close proximity to each other were favored as a means of increasing sampling efficiency.

Each representative of a type thus selected (such as pinyon-juniper) is then surveyed on the ground and the most prevalent variants of the overall type (for example, pinyon-juniper with a sagebrush understory) are identified. The largest block of homogeneous vegetation of each variant is selected for sampling. Sampling sites are shown in Figure 1.

A modification of the line-strip technique as described by Woodin and Lindsey (1954), Lindsey (1955), and Potter (1957) is used during the phytosociological investigations. This method incorporates the attributes of both line-strip and quadrat sampling systems to insure that valid and reliable data are obtained in the field for each identified vegetation type.

The practical field application of this method requires the establishment of 96, 60 m x 6 m (196.8 x 19.7 ft) transects within the major vegetation types occurring both on the tract and in the surrounding area. Of these 96 transects, 38 are being retained as permanent transects to be sampled again



TERRESTRIAL ECOLOGICAL INVESTIGATIONS

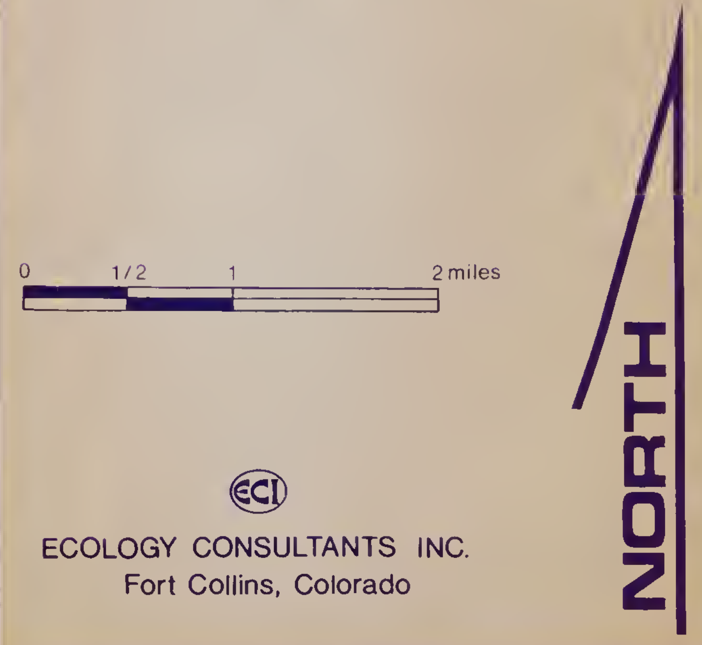
RIO BLANCO OIL SHALE PROJECT

VEGETATION SAMPLING SITES

○ **Exclosure Sites (1-3)**

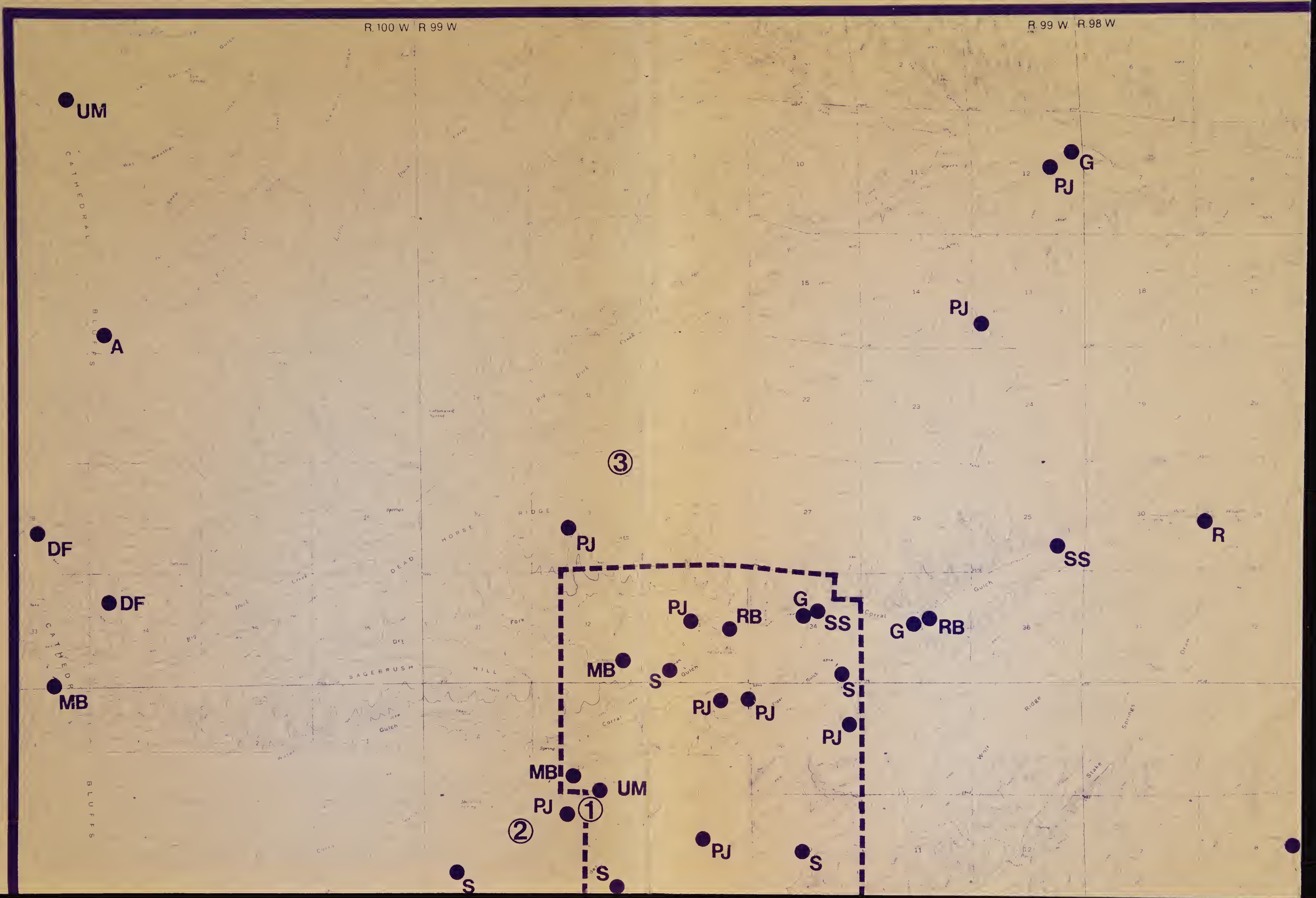
● **Permanent Sampling Sites**

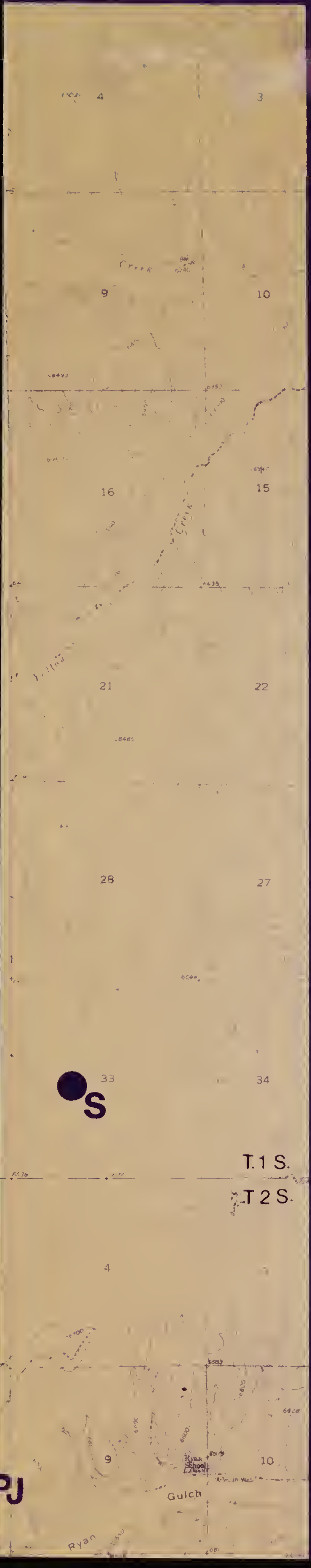
A	Aspen
DF	Douglas fir
MB	Mixed Brush
PJ	Pinyon - Juniper
S	Sagebrush
RB	Rabbitbrush
SS	Shadscale
G	Greasewood
R	Riparian
UM	Upland Meadow



ECI

ECOLOGY CONSULTANTS INC.
Fort Collins, Colorado


R. 100 W
R 99 W
R. 99 W
R. 98 W
UM
A
CATHEDRAL
BLUFFS
DF
DF
MB
CATHEDRAL
BLUFFS
G
PJ
PJ
③
R
SS
PJ
DEAD HORSE RIDGE
SAGEBRUSH HILL
PJ
RB
G
SS
G
RB
MB
S
S
PJ
PJ
PJ
MB
UM
PJ
①
②
PJ
S
S
S
Corral
Gulch
Dry
Fork
Big
Duck
Creek
Ridge
Springs
Stake



TERRESTRIAL ECOLOGICAL INVESTIGATIONS

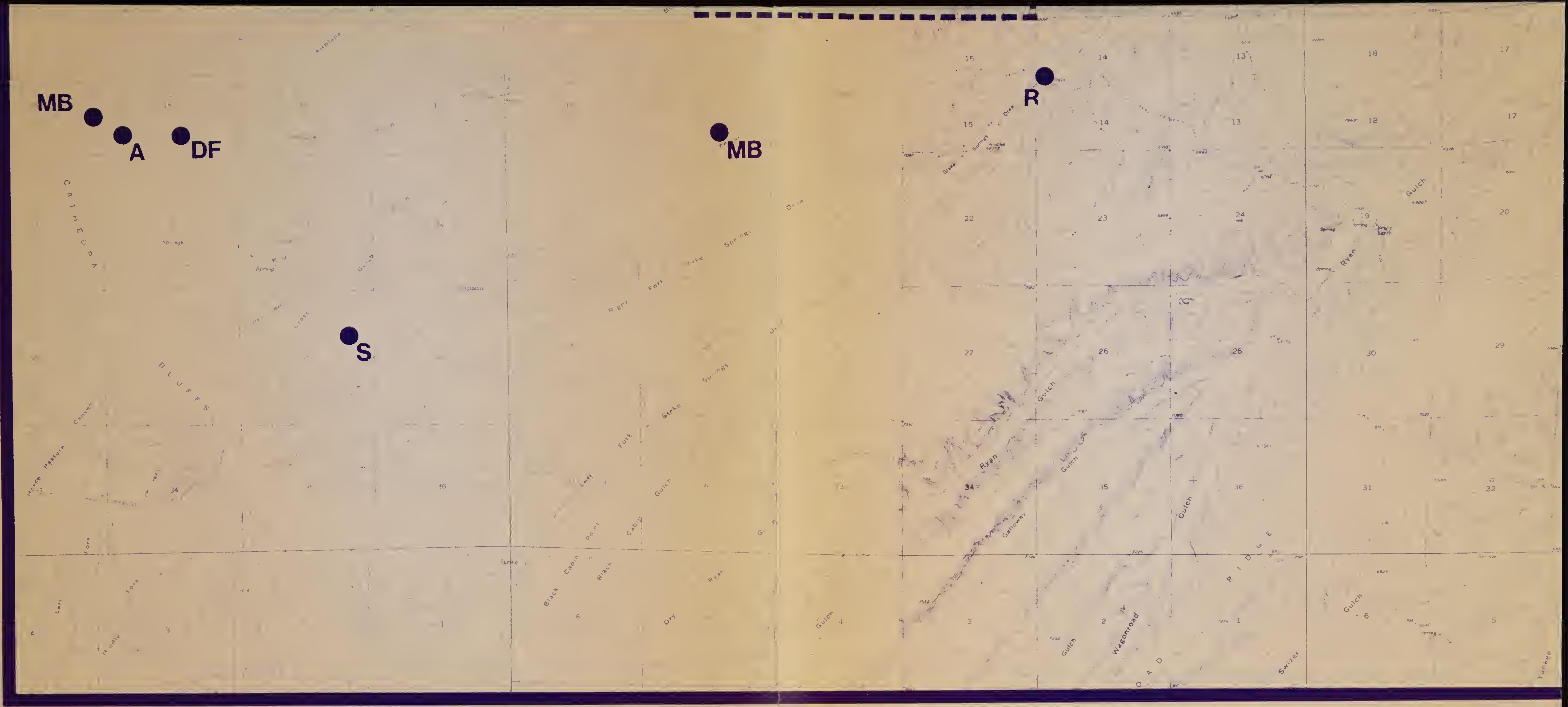
RIO BLANCO OIL SHALE PROJECT

VEGETATION SAMPLING SITES

○ **Exclosure Sites (1-3)**

● **Permanent Sampling Sites**

A	Aspen
DF	Douglas fir
MB	Mixed Brush
PJ	Pinyon - Juniper
S	Sagebrush
RB	Rabbitbrush


MB
A
DF
S
MB
R
Airplane
CATHEURA
BLUFFS
Canyon
Horse Pasture
Left Fork
Middle
Right Fork Stake Springs
Left Fork Stake Gulch
Black Cabin
Point
Ryan
Dry
Gulch
Ryan Gulch
Galloway
Wagonroad
Switzer
ROAD RIDGE
Yankee
Spring
15
14
13
18
17
22
23
24
19
20
27
26
25
30
29
34
35
36
31
32
3
2
1
6
5
4

SS	Shadscale
G	Greasewood
R	Riparian
UM	Upland Meadow

ECOLOGY CONSULTANTS INC.
Fort Collins, Colorado

Figure 1. Location of permanent vegetation sampling sites and grazing exclosures for the Rio Blanco Oil Shale Project.

in all subsequent sampling periods (Figure 1). These will provide data on seasonal and annual vegetation changes. The remaining 58 nonpermanent transects will be relocated during each sampling period to obtain a better statistical representation of each vegetation type, both on and off the tract, than would be possible using only permanent transects.

Location and Orientation of Sampling Transects

Within each sampling plot, the observer walks to a central area of the selected vegetation block and randomly locates a sampling transect using a 5-digit random number table. The observer moved from this point in the compass direction dictated by the first three digits (for a number of steps given by the first two digits) and makes a left or right turn depending on whether the third digit is odd or even, respectively. The observer then takes the number of steps dictated by the last two digits of the 5-digit number, to locate the starting point of the 60 m x 6 m transect. The transect is oriented in a compass direction given by the last three digits of the random number. This procedure provides a better opportunity to sample the major plant associations occurring within each vegetation type.

Data Gathering and Recording

Quantitative and qualitative phytosociological data pertaining to the tree, shrub, and herbaceous strata are gathered and recorded from each transect.

Tree and shrub strata. A taut 30 m (98.4 ft) tape defining the centerline of the transect is used to determine the foliage intercept distance along the line for each of the 60 m transects. The first and last numerical units of the tape which are vertically intercepted by foliage of each tree or shrub are recorded in the I_1 and I_2 columns of the data sheet shown in Figure 2. The difference between I_1 and I_2 gives the total units of foliage cover by an individual plant.

The portion of the data sheet for recording shrub canopy layer data is entitled "Reproductive Class" (Figure 2). A new data sheet is started for

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst:________________ Project:__________ Date:________________
Site:__________________________________ Length of Line:________________
:________ R:________ Sec.:________ ¼ Sec.:________ Transect Direction:______
General Description of Land:____
Vegetation Type:__________________ Condition of Foliage:____________________

MATURE Class 3" plus diam.						Reproductive class 3' high < 3" diam.				
Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units

Figure 2. Tree and shrub strata field data sheet for the Rio Blanco Oil Shale Project.

each new transect. Species are listed as they are encountered, leaving enough space between entries to allow recording of intercept data in the I_1 and I_2 columns for each. When the space between entries is filled with intercept data, the "Length of Line" in the data sheet heading is filled in with the numerical unit on the tape that corresponds with the end reading in the I_2 column and a new data sheet is begun.

Tree canopy data are recorded in that section of the data sheet entitled "Mature Class" (Figure 2). The numbers corresponding to the start and end of each foliage intercept are recorded for each species as discussed for the shrub stratum. Intercepts for trees with trunk diameters over 7.6 cm (3 in) are recorded in the left hand column while the cover of trees smaller than 7.6 cm (saplings) are accounted for in the right hand column (Figure 2). This size class division allows the separate evaluation of cover values in both the sapling and mature tree classes (James and Shugart, 1970).

In addition to recording foliage intercept, an accurate count is made of shrubs, seedlings and saplings of each species occurring within approximately 3 m (9.84 ft) on either side of the tape measure. The 3 m distance from the tape is measured with a meter stick at the start of each transect and is repeatedly measured when distances of individual shrubs or trees are in doubt. Density values for shrubs and for seedlings and saplings of tree species are determined from this census. Census data are collected and recorded by 15 m (49.2 ft) segments of the transect, effectively making a series of four quadrats, approximately 15 m x 6 m (19.7 ft). This series serves as the basis for frequency values for the shrub and tree strata.

For mature trees located in each quadrat the diameter is recorded in centimeters. The enumeration of these recorded entries serves in determination of density in the mature tree class. The trunk diameters recorded for the mature class of trees are later converted to basal area values. Size-class distribution is also derived from the recorded measurements of trunk diameters. Due to the low branching habit of both pinyon and juniper, trunk diameters are estimated to the nearest centimeter by using a meter stick (Potter, 1971, personal communication) at the 0.5 m (1.64 ft) mark (Barger and Ffolliott, 1972) just below fork swell and above basal fluting instead of the customary

breast height, 1.37 m (4.5 ft), which is used to measure the straight-boled Douglas fir and aspen.

Herbaceous stratum. Herbaceous cover values are estimated with a 0.5 m (1.64 ft) by 1 m (3.28 ft) wire-frame quadrat. The long axis of the quadrat is placed parallel to and centered at 6 m intervals on the right side of the centerline tape. Ocular estimates of the amount of ground covered by vegetation (total cover) are recorded for each quadrat on a field data sheet (Figure 3). Each species is identified and listed. Unknown species are collected from a nearby location, assigned a collection code number which will be recorded on the data form as that species, then a relative cover value for each species (summing to 100% for all species) is recorded for each quadrat. The percentages assigned to each species in this investigation are estimated and recorded by 5 percent increment values in the range from 5 to 95 percent and by 1 percent increments at the extremes. When it is estimated that the total cover or a species cover value is less than 1 percent (e.g., one blade of grass) it is recorded by placing a "T" (trace) on the data sheet in the appropriate space. Frequency values are derived from the recorded occurrence of each species in the ten, 0.5 m x 1 m quadrats sampled along each transect.

2.3.1.2.2. Plant Collection

Collection and Processing of Specimens

Plant specimens collected during each vegetation sampling period are field identified, dated, numbered, and pressed. Location, habitat, and elevation of each collected specimen are noted in field books. Elevation is recorded from topographic maps with periodic checks using an altimeter. Attempts are made to collect all specimens in a manner that adequately illustrates taxonomically important plant characteristics such as roots, tubers, bulbs, stems, leaves, flowers, and fruits. Plants lacking distinguishing taxonomic characters are not taken as voucher specimens.

At the time of collection, pertinent field observations, including any abnormal foliar conditions, which provide phytosociological information in addition to that gathered during routine analyses, are included in permanent vegetation records.

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project__________ Site__________ Date_______________ Size of quadrat_______________

Field Analysts:______________________________ Sheet No._______ of _______

General description of land____

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0

Figure 3. Quadrat data sheet for understory and range vegetation for the Rio Blanco Oil Shale Project.

Each plant specimen is given a project designation and numbered sequentially (e.g., plant specimen #83.12 - project #83, specimen #12). Collection numbers are duplicated only if more than one specimen is taken from the same plant at the same time.

The location of each plant specimen collected in the field is documented according to state, county, township, range, section, quarter-quarter section, and/or direction and mileage from a prominent map feature. Additional data including plant height (if only one part of the plant is taken), flower color, degree and aspect of slope, soil conditions, abundance estimate (rare, common, abundant) according to fieldworker's observations, and associated plants are noted in the permanent field books.

Most plants are immediately pressed as they are collected. However, some plants may be assigned a collection number and field tagged and then held in a plastic sack containing a wet towel or placed under refrigeration in a portable ice chest for short periods to preserve their freshness.

Small herbaceous plants are collected and pressed in their entirety. However, only representative portions of large herbaceous and woody species are taken as voucher specimens. Tall, slender herbaceous plants are folded to fit into the press. All small herbaceous plants are collected with their root systems attached. Each plant specimen is placed in a newspaper sheet and appropriate collection numbers, tentative identification name, location, and other distinctive features are noted on the sheet. The newspaper sheet containing the plant specimen is then placed between two drying blotters which are separated from the next unit, within the same plant press, by a piece of corrugated cardboard. When the press has been filled, it is tightened snugly and left to dry in the hot sun or in a warm dry place. Drying blotters are exchanged and the press tightened and repacked as necessary until all specimens are flattened and dried to herbarium specifications. Appropriate precautions are taken to protect all plant specimens from insect pests.

Laboratory Identification and Storage

All plant specimens are field identified to the lowest feasible taxon and routed to ECI laboratories in Fort Collins where they are identified to species level and stored. Plant species which are questionable and/or difficult

to distinguish are positively identified by a professional plant taxonomist at Colorado State University. Following final identification, all plant specimens are catalogued by family and listed alphabetically by genus. Beetle (1970), Harrington (1954), Hitchcock (1971), Kearney and Peebles (1969) are used in identification and for nomenclature in these investigations. Finally, each positively identified voucher specimen is placed in individual, taxonomically arranged folders and permanently stored in the ECI herbarium for future reference.

Plants that become damaged, molded, mildewed, or are otherwise rendered unacceptable as voucher specimens are returned to the original collector. Disposal of such specimens takes place only after the original collector notes the appropriate specimen number in field books. Damaged plant specimens are discarded only if a replacement voucher is available.

2.3.1.3. RESULTS AND DISCUSSION

Ten different vegetative types in 96 separate locations were sampled on and near Tract C-a during October, 1974 (Table 1) utilizing a modification of the line-strip technique as described by Wooden and Lindsey (1954), Lindsey (1955), and Potter (1957). Random and permanent transect data were combined to provide an overall regional view of the general phytosociological characteristics common to each of the ten different vegetative types. The total number of species, total percent ground cover, total density, and predominant species for each stratum of each of the vegetation types are presented in Table 2 and discussed in the text of this report. Table 3 presents a list of species encountered during the October sampling period.

Summarized field data gathered during one sampling period (fall) have been compared to those data presented in the available literature in attempts to qualify our current findings. Comparisons such as these are useful in that they allow tentative identification of certain important phytosociological characteristics of the vegetation types studied, but in no way do these limited data permit definitive conclusions. An increasing base of phytosociological data resulting from future scheduled field sampling efforts

Table 1. Numerical distribution of sampling transects (60 m x 6 m) in the major vegetation types on and adjacent to Tract C-a for Rio Blanco Oil Shale Project, October, 1974

	No. Permanent Transects on Tract C-a	No. Permanent Transects off Tract C-a	No. Non-permanent Transects on Tract C-a	No. Non-permanent Transects off Tract C-a	Total Transects Per Type
Aspen		2		2	4
Douglas fir		3		3	6
Mixed brush	2	3	2	6	13
Pinyon-juniper	5	5	5	11	26
Sagebrush	4	3	6	10	23
Meadow	1	1	1	1	4
Shadscale	1	1	1	1	4
Greasewood	1	2	2	2	7
Rabbitbrush	1	1	2	1	5
Riparian		2		2	4
Subtotal	15	23	19	39	
				Total Transects	96

Table 2. Summary of some phytosociological characteristics of ten different vegetation types sampled on Tract C-a and the surrounding area for the Rio Blanco Oil Shale Project, October, 1974

Vegetation Type/Stratum	Total Number of Species	Total % Ground Cover	Total Density Per Hectare	Predominant Species
Aspen				
Herb	28	29.0	1/	*Carex* sp., *Bromus* sp.
Shrub	9	42.8	13,340 2/	*Symphoricarpos* sp., *Amelanchier* sp., *Populus tremuloides*
Tree	1	33.5	479	*Populus tremuloides*
Douglas fir				
Herb	18	21.5	1/	*Carex* sp., *Aster* sp., *Galiumboreale*
Shrub	8	41.0	12,055 2/	*Symphoricarpos* sp., *Amelanchier* sp., *Prunus* sp.
Tree	2	70.7	518	*Pseudotsuga menziesii*, *Populus tremuloides*
Upland meadow				
Herb	33	22.9	1/	*Agropyron trachycaulum*, *Poa* sp.
Shrub	3/	3/	3/	
Tree	3/	3/	3/	
Mixed brush				
Herb	36	21.8	1/	*Agropyron trachycaulum*, *Carex* sp., *Festuca* sp., *Poa* sp.
Shrub	12	41.7	18,622 2/	*Amelanchier* sp., *Symphoricarpos* sp., *Artemisia tridentata*
Tree	2	1.0	11.1	*Juniperus osteosperma*, *Pinus edulis*

Table 2. (Continued)

Vegetation Type/Stratum	Total Number of Species	Total % Ground Cover	Total Density Per Hectare	Predominant Species
Pinyon-Juniper				
Herb	63	5.4	[1]	*Agropyron trachycaulum*, *Festuca* sp., *Poa* sp.
Shrub	15	8.8	3,730.5	*Artemisia tridentata*, *Pinus edulis*, *Purshia tridentata*, *Chrysothamnus* sp.
Tree	2	21.5	295	*Juniperus osteosperma*, *Pinus edulis*
Sagebrush				
Herb	53	12.6	[1]	*Agropyron trachycaulum*, *Poa* sp., *Festuca* sp.
Shrub	13	28.8	13,214 [2]	*Artemisia tridentata*, *Chrysothamnus* sp., *Amelanchier* sp.
Tree	0[3]	0[3]	0[3]	
Shadscale				
Herb	13	22.6	[1]	*Agropyron trachycaulum*, *Oryzopsis hymenoides*, *Gutierrezia* sp.
Shrub	11	15.5	8,444	*Atriplex confertifolia*, *Chrysothamnus* sp. *Artemisia tridentata*, *Artemisia frigida*
Tree	1	<1.0	13.9	*Juniperus osteosperma*
Greasewood				
Herb	11	5.2	[1]	*Agropyron trachycaulum*, *Bromus tectorum*, *Lepidium* sp.
Shrub	6	43.5	15,223	*Sarcobatus vermiculatus*, *Artemisia tridentata*
Tree	0[3]	0[3]	0[3]	

Table 2. (Continued)

Vegetation Type/Stratum	Total Number of Species	Total % Ground Cover	Total Density Per Hectare	Predominant Species
Rabbitbrush				
Herb	11	11.5	0[1]	*Elymus cinereus*, *Agropyron* sp., *Poa pratensis*
Shrub	4	40.8	9,055	*Chrysothamnus nauseosus*, *Artemisia tridentata*
Tree	0[3]	0[3]	0[3]	
Riparian				
Herb	37	53.5	[1]	*Scirpus* sp., *Cyperus* sp., Unidentified grass
Shrub	0[3]	0[3]	0[3]	
Tree	0[3]	0[3]	0[3]	

---

[1] Density is not determined for herbaceous layer.

[2] Includes stem counts of *Amelanchier*.

[3] Strata not present or not encountered during sampling.

Table 3. Tree, shrub, and herbaceous vegetation species encountered in the vicinity of Tract C-a for the Rio Blanco Oil Shale Project, October, 1974

Scientific Name	Common Name
TREES	
Juniperus osteosperma (utahensis)	Utah juniper
Pinus edulis	Pinyon pine
Populus tremuloides	Quaking aspen
Pseudotsuga menziesii (taxifolia)	Common Douglas fir
SHRUBS	
Acer glabrum	Rocky Mountain maple
Amelanchier sp.	Serviceberry
Artemisia frigida	Fringed sagewort
Artemisia tridentata	Basin big sagebrush
Atriplex canescens	Fourwing saltbush
Atriplex confertifolia	Shadscale saltbush
Cercocarpus montanus	True mountain mahogany
Chrysothamnus nauseosus	Rubber rabbitbrush
Chrysothamnus vicidiflorus	Douglas rabbitbrush
Ephedra sp.	Mormon tea
Eurotia lanata	Common winterfat
Gutierrezia sp.	Snakeweed
Prunus sp.	Chokecherry
Purshia tridentata	Antelope bitterbrush
Quercus gambelii	Gambel oak
Rhus sp.	Sumac
Ribes sp.	Currant
Rosa sp.	Rose
Sarcobatus vermiculatus	Black greasewood
Symphoricarpos sp.	Snowberry
Tetradymia canescens	Gray horsebrush
HERBACEOUS SPECIES	
Achillea lanulosa	Western yarrow
Agropyron cristatum	Crested wheatgrass
Agropyron smithii	Western wheatgrass
Agropyron spicatum	Bluebunch wheatgrass
Agropyron trachycaulum	Slender wheatgrass

Table 3. (Continued)

Scientific Name	Common Name
HERBACEOUS SPECIES (Continued)	
Ambrosia sp.	Ragweed
Androsace sp.	Rockjasmine
Angelica sp.	Angelica
Antennaria sp.	Pussytoes
Haplopappus sp.	Goldenweed
Haplopappus spinulosus	Ironplant goldenweed
Arctostaphylos sp.	Manzanita
Arenaria sp.	Sandwort
Aster sp.	Aster
Astragalus sp.	Milkvetch
Balsamorhiza sp.	Balsamroot
Bouteloua gracilis	Blue grama
Bromus ciliatus	Fringed brome
Bromus marginatus	Mountain brome
Bromus tectorum	Cheatgrass brome
Carex sp.	Sedge
Chaenactis sp.	Dustymaiden
Chenopodium sp.	Goosefoot
Cryptantha sp.	Cryptantha
Cyperus sp.	Flatsedge
Descurainia sp.	Tansymustard
Draba sp.	Draba
Elymus sp.	Wildrye
Equisetum sp.	Horsetail
Erigeron sp.	Fleabane
Eriogonum sp.	Wildbuckwheat
Eriogonum alatum	Wing wildbuckwheat
Euphorbia sp.	Spurge
Festuca sp.	Fescue
Fragaria sp.	Strawberry
Galium boreale	Northern bedstraw
Geranium sp.	Geranium
Gilia sp.	Gilia
Hymenoxys sp.	Actinea
Kochia scoparia	Fireweed summercypress

Table 3. (Continued)

Scientific Name	Common Name
HERBACEOUS SPECIES (Continued)	
Koeleria cristata	Prairie junegrass
Lappula sp.	Stickseed
Lepidium sp.	Pepperweed
Lithospermum sp.	Gromwell
Lupinus sp.	Lupine
Mentzelia sp.	Mentzelia
Mertensia sp.	Bluebells
Muhlenbergia sp.	Muhly
Oenothera sp.	Evening primrose
Opuntia polyacantha	Plains pricklypear
Oryzopsis hymenoides	Indian ricegrass
Oxytropis lamberti	Lambert loco
Penstemon caespitosus	Mat penstemon
Penstemon strictus	Rocky Mountain penstemon
Phlox sp.	Phlox
Poa interior	Inland bluegrass
Poa pratensis	Kentucky bluegrass
Poa secunda	Sandberg bluegrass
Panunculus sp.	Buttercup
Rorippa sp.	Cress
Scirpus sp.	Bulrush
Sitanion hystrix	Bottlebrush squirreltail
Sphaeralcea sp.	Globemallow
Stipa sp.	Needlegrass
Stipa comata	Needleandthread
Thalictrum sp.	Meadowrue
Thermopsis montana	Mountain thermopsis
Viola sp.	Violet

should substantiate many of the preliminary interpretations made in this report, and further elucidate the important ecological and phytosociological characteristics of the various vegetation types occupying the study area.

Aspen

Data from four different aspen stands were combined and analyzed to provide an overall view of the aspen type occurring in the study area. Three distinctive strata (herbaceous, shrub, and tree) supporting at least 38 different identifiable plant species, characterized the aspen type in the vicinity of Tract C-a.

At least 28 species made up the aspen herbaceous stratum of which a sedge (Carex sp.) and a grass (Bromus sp.) shared predominance. Only 29% of the ground was covered by the foliage of all herbaceous species combined. Vories (1974) reported 51 herbaceous species and only 1.2% bare ground for the Piceance Basin aspen type. Summer sampling of the herbaceous stratum in this vegetation type should reveal a much more diverse flora in addition to higher cover estimates for the herbacious stratum.

Of the species comprising the aspen shrub stratum, Symphoricarpos sp. and Amelanchier sp. were predominent. Populus tremuloides was also common in the shrub stratum. The foliage of all species in the shrub stratum covered an average of 42.8% of the ground while the total density of shrubs within this stratum was 13,340 individuals per hectare. This large number of individual stems resulted from stem counts of each Amelanchier clone. The two predominant shrubs (Amelanchier sp. and Symphoricarpos sp.) occurred on 90% to 100% of all sample quadrats indicating a fairly even distribution for these plants. Over 70% of the total shrub ground cover was contributed by these two dominant species. The comparatively high density and cover values exhibited by saplings and seedlings in the shrub stratum may be an indication of the relatively young age of the aspen stands sampled.

Populus tremuloides was the only species encountered in the tree stratum of the aspen type. Only 19% of all trees in this stratum were classed as mature [> 7.6 cm (3 in)] and the largest of these was 30 cm (11.8 in) dbh (diameter breast high). Most trees encountered (81%) were classified as

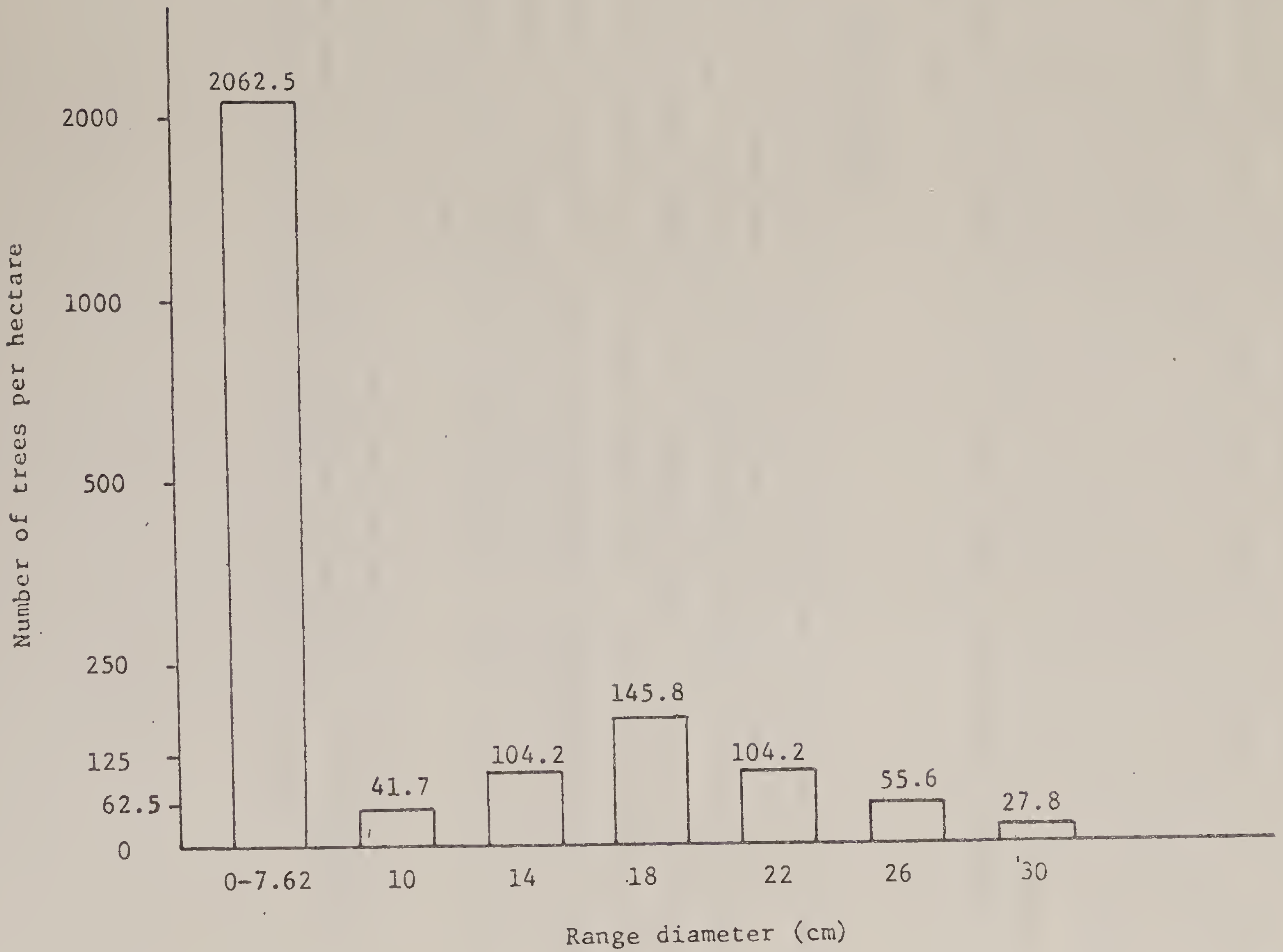


Figure 4. Size class distribution of aspen (*Populus tremuloides*) for the Rio Blanco Oil Shale Project, October, 1974.

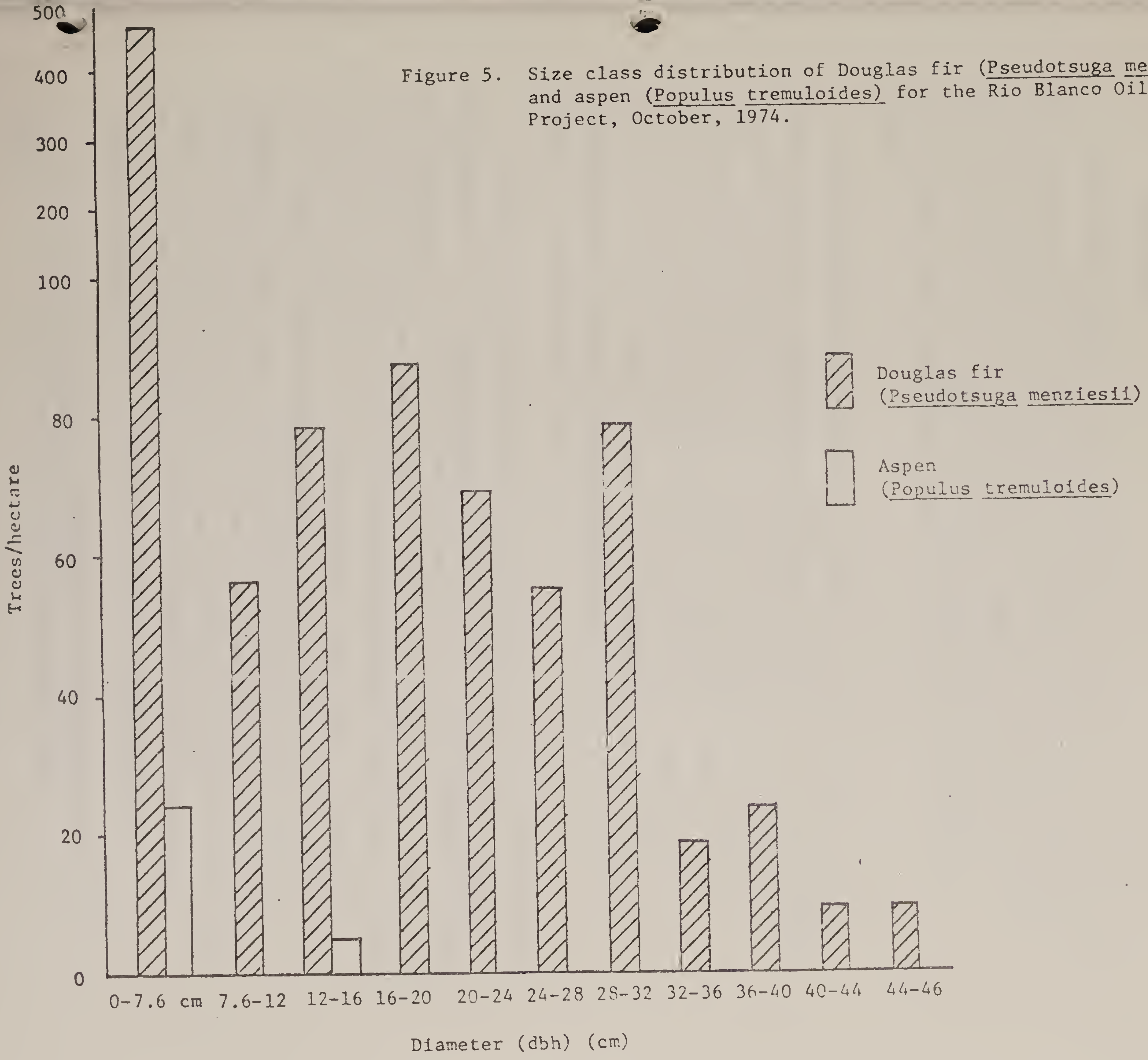
Pseudotsuga menziesii and Populus tremuloides constituted the tree stratum. Douglas fir trees in the mature class ranged in size from 7.6 cm to 46 cm (18.1 in.) dbh, but only 12% of these mature trees were greater than 30 cm dbh. Nearly 50% of all Douglas fir sampled were classed as saplings (7.6 cm dbh). Eighty-three percent of all aspen encountered in this stand were classed as saplings and trees greater than 14 cm (5.5 in.) dbh were not encountered (Figure 5). Aspen were uncommon in the Douglas fir tree stratum, occurring with a frequency of only 8.0%. The total density of both species was estimated to be 518 individual trees per hectare. Both aspen and Douglas fir appeared in the shrub stratum but were absent as seedlings from the herbaceous layer.

Upland Meadow

Phytosociological data gathered at four different upland meadow locations were combined and analyzed. Shrub and tree strata were absent from the different areas of upland meadow sampled and many members of the herbaceous stratum were dormant during the fall sampling period. At least 33 herbaeeous species were recorded for the upland meadow type. Cover and frequency estimates indicated that two grasses, Poa sp. and Agropyron trachycaulum shared dominance and accounted for approximately 45% of the total herbaceous foliage cover. These grasses also occurred with a high frequency, being observed in nearly 90% of all sample quadrants.

An estimated 22.9% of the ground was covered by the foliage of all herbaceous species. This condition may be an indication of the inadequacy of sampling in the fall when many herbaceous species were dormant.

Figure 5. Size class distribution of Douglas fir (Pseudotsuga menziesii) and aspen (Populus tremuloides) for the Rio Blanco Oil Shale Project, October, 1974.



Mixed Brush

Mixed brush communities were sampled at 13 different sites, and data from all sites were combined and analyzed to provide an overall view of the mixed brush type occurring in the study area. Two distinctive strata (herbaceous and shrub), comprised of at least 48 species, were recognized and sampled at all mixed brush sites. Three woody species were dominant in the shrub stratum, while three grasses and a sedge were dominant in the herbaceous stratum.

The herbaceous stratum comprised at least 36 species of which three grasses (*Festuca* sp., *Agropyron trachycaulum* and *Poa* sp.) and a sedge (*Carex* sp.) were dominant based on cover and frequency estimates. An average 21.8% of the ground was covered by the foliage of all species, 50% of which is dominated by the grass and sedge species. Vories (1974) sampled similar plant communities in the Piceance Basin and reported 66 species in the herbaceous stratum, of which *Carex* sp. and *Collinsia* sp. were common. He also reported several introduced grasses (*Agropyron* sp. and *Poa* sp.) as being present in the mixed brush understory.

At least 12 species occurred in the shrub stratum of the mixed brush type. *Amelanchier* sp. and *Symphoricarpos* sp. were dominant. *Artemisia tridentata* and *Chrysothamus* sp. were also common members of the mixed brush shrub stratum. The foliage of species comprising the shrub stratum covered an average of 41.7% of the ground while the total density of shrubs within this stratum was 18,622 individuals per hectare. This large number of individuals is due to the incorporation of individual *Amelanchier* stem counts in the data, rather than *Amelanchier* clone counts. Over 80% of the total shrub ground cover was contributed by the two dominant shrubs. These dominant shrubs were also evenly distributed over the study areas occurring at a frequency of over 85%. The mixed brush shrub stratum was mainly composed of evenly distributed *Artemisia tridentata* and a clumped distribution of *Amelanchier* sp.

Two tree species (*Juniperus osteosperma* and *Pinus edulis*) were rare (density = 11.1 trees/ha; frequency = 5%) in the mixed brush.

Pinyon-Juniper

Data from 26 different pinyon-juniper sites were combined and analyzed. Three distinctive strata (herbaceous, shrub, tree), supporting at least 70 different plant species, characterized the pinyon-juniper vegetation type in the area of Tract Ca. Based on the dominant plant species comprising the herbaceous, shrub, and tree strata, the pinyon-juniper type in the Tract C-a area can be generally described as a Juniperus osterosperma - Pinus edulis - Artemisia tridentata - Agropyron trachycaulum community.

At least 63 species made up the herbaceous stratum, of which Agropyron trachycaulum, Festuca sp. and Poa sp. were dominant, based on cover an frequency values. Foliage cover in the herbaceous stratum was sparce, with 5.4% of the ground covered by the foliage of all species.

The shrub stratum was composed of at least 15 different species. Artemisia tridentata was the dominant shrub species exhibiting high density, frequency, and cover values. Pinus edulis, Purshia tridentata and Chrysothamus sp. were important members of the pinyon-juniper shrub stratum. The total shrub density was estimated to be 3,730 individuals per hectare and the total percent ground foliage cover for all shrub species was 8.8%.

The average combined total cover of the pinyon-juniper lower strata (herbaceous and shrub) on and near Tract C-a was 14.2% of the ground covered. Late fall sampling, during which many herbaceous species were dormant, may have accounted for apparently low cover values in the herbaceous stratum. Jameson (1961, 1966) suggests that pinyon and juniper little inhibits germination of understory species and may be one cause for low cover values in the lower strata of older stands.

Pinus edulis and Juniperus osteosperma were the only two tree species encountered in the pinyon-juniper community and of these, the latter occurred with a greater density and frequency, exhibiting values of 209.7 individuals per hectare and 63.9% frequency of occurrence. Juniper had a total basal area of 3030.07 m^2/ha, while pinyon had a total basal area of 833.28 m^2 ha. These data, combined with relative ground cover values (13.1% for juniper; 8.4% for pinyon) indicate that juniper is dominant in the pinyon-juniper sites studied.

Mature juniper trees ranged in size from 7.62 cm to 118 cm (46.5 in) (diameter) with the majority (80%) falling within the 10 cm (3.9 in.) to 50 cm (19.7 in.) diameter size class. Mature pinyon trees ranged in size from 7.62 cm to 98 cm (38.6 in.) in diameter, with the majority (66%) falling within the 10 cm to 30 cm diameter size class (Figure 6).

Sagebrush

Sagebrush communities were sampled at 23 different sites and data from all sites were combined and analyzed to provide an overall view of the sagebrush type occurring in the study area. Two distinctive strata (herbaceous and shrub) were recognized and sampled at all sagebrush sites. Sagebrush communities occurring in the area of Tract C-a are best described collectively as an Artemisia tridentata - Agropyron trachycaulum type based on the predominant species occupying the shrub and herbaceous strata.

At least 53 different species composed the herbaceous stratum. Comparatively high frequency and cover values indicate that dominance in the herbaceous stratum is shared by three grasses: Agropyron trachycaulum, Poa

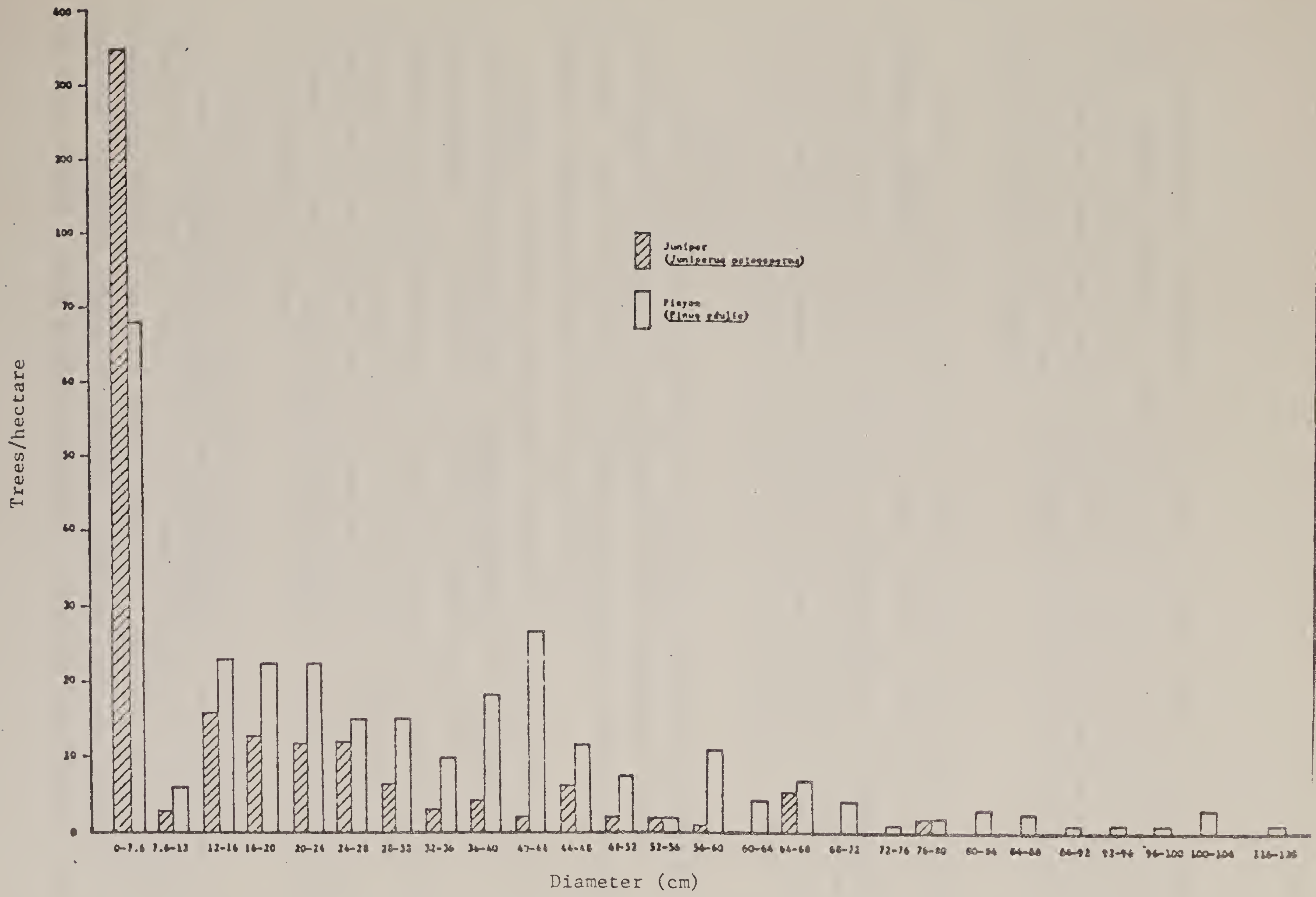


Figure 6. Size class distribution of pinyon (Pinus edulis) and juniper (Juniperus osteosperma) for the Rio Blanco Oil Shale Project, October, 1974.

sp. and Festuca sp. An average 12.6% of the ground was covered by the foliage of all herbaceous species but nearly 50% of this ground cover was contributed by the three predominant grasses. Vories (1974) reported 117 herbaceous species for sagebrush communities analyzed in the Piceance Basin, suggesting that the fall sampling period missed many of the herbaceous species which were probably dormant at the time of sampling.

At least 13 different species were listed for the shrub stratum, of which Artemisia tridentata occurred with the highest frequency and density and contributed the greatest percent ground cover. Chrysothamnus sp. and Amelanchier sp. also appeared as important components of the sagebrush shrub stratum over all sites sampled. The sagebrush type shrub stratum covered an average 28.8% of the ground and occurred at a density of 13,214 individuals per hectare.

Shadscale

Phytosociological data gathered at four different shadscale communities were combined and analyzed. Three distinctive strata (herbaceous, shrub, and tree) supporting at least 24 different plant species, characterized the shadscale communities samples in the area of Tract C-a.

At least 13 different species were recorded for the herbaceous stratum of which Agropyron trachycaulum, Oryzopsis hymenoides, and Gutierrezia sp. were predominant. An average of 22.6% of the ground was covered by the foliage of all herbaceous species combined but over 60% of this ground cover was contributed by the dominant species. Vories (1974) samples shadscale communities in the Piceance Basin but reported a total of 10 species for the herbaceous stratum with Stipa comata, Bromus tectorum, and Doeleria gracilis as the predominant species.

At least 11 different species were recorded for the shadscale shrub stratum with Atriplex confertifolia and Chrysothamnus sp. being predominant. These plants contributed nearly 80% of the total shrub ground cover and were evenly distributed in the shrub stratum appearing in about 80% of the sample gradrats. Artemisia frigida and Artemisia tridentata were also common in the shrub stratum. Pinus edulis was present but scantily distributed in the

shrub layer. A total density of 8,444 individual shrubs/hectare was calculated for the shadscale type and all shrubs covered a total of 15.5% of the ground.

Juniperus osteosperma appeared as a mature tree in the shadscale type. Trees were generally small, 1.81 m^2 basal area/ha (48.1 sq ft basal area/A), uncommon (12.5% frequency) and sparse (13.9 individuals/ha).

Greasewood

Data gathered at seven greasewood sites were combined and analyzed to provide an overall view of the greasewood type in the area of Tract C-a. Two distinctive strata (herbaceous and shrub), supporting at least 17 different plant species, were recognized and sampled. Greasewood communities occurring in the area of Tract C-a are best described collectively as an Artemisia tridentata - Sarcobatus vermiculatus - Agropyron trachycaulum type based on the predominant species occupying both shrub and herbaceous strata.

At least 11 different herbaceous species composed the herbaceous stratum of which Agropyron trachycaulum was dominant based on density and frequency estimates. Bromus tectorum and Lepidium sp. were also common in the herbaceous stratum and can be considered the major associated species in the type. An average of 5.2% of the ground was covered by the foliage of all herbaceous species with 85% of this ground cover contributed by the dominant species and two major associated grasses. Similar Piceance Basin greasewood types analyzed by Vories (1974) exhibited a much greater percent ground cover and a higher species diversity (15 species) for the herbaceous stratum. He also reported a luxuriant growth of annuals and moderate livestock use in the greasewood type.

The shrub layer included at least six species, with Artemisia tridentata dominant. Sarcobatus vermiculatus, for which this type was named, appeared as a shrub species of secondary importance in the greasewood communities sampled. The greasewood shrub stratum covered 43.5% of the ground and occurred at a density of 15,223 individuals per hectare. Both Artemisia tridentata and Sarcobatus vermiculatus were homogeneously distributed throughout the greasewood type occurring in 100% of all shrub sample quadrats.

Rabbitbrush

Rabbitbrush communities were sampled at five different sites and data from all sites were combined and analyzed to provide an overall view of the rabbitbrush type occurring in the study area. Two distinctive strata (herbaceous and shrub) were recognized and sampled at all rabbitbrush sites. Rabbitbrush communities occurring in the area of Tract C-a are best described collectively as a Chrysothamnus nauseosus - Artemisia tridentata - Elymus cinereus type based on the dominant species occupying both shrub and herbaceous strata.

At least 11 different species composed the herbaceous stratum of which Elymus cinereus was dominant based on cover and frequency estimates. Agropyron sp. and Poa pratensis were also common in the herbaceous stratum. An average of 11.5% of the ground was covered by the foliage of all herbaceous species with nearly 70% of this ground cover contributed by one dominant and the two common grasses. Similar rabbitbrush types analyzed by Vories (1974) exhibited a greater percent ground cover and a higher species diversity (37 species) for the herbaceous stratum than was observed in the rabbitbrush communities sampled in this study.

Four different species were listed for the shrub stratum of which Chrysothamnus nauseosus was dominant, occurring with the highest frequency and density and contributing the greatest percent ground cover. Artemisia

tridentata also appeared as an important shrub over all rabbitbrush communities sampled. The rabbitbrush type shrub stratum covered an average of 40.8% of the ground and occurred at a density of 9,055 individuals per hectare.

Riparian

Data gathered at four different riparian locations were combined and analyzed. Shrub and tree strata were absent from the different areas of riparian habitat sampled. The poor condition of most members of the herbaceous stratum rendered them unidentifiable. At least 37 species were listed for the riparian herbaceous stratum, of which two sedges (Scirpus sp. and Cyperus sp.) and an unidentifiable grass were dominant based on cover and frequency values. Heavy overgrazing in most riparian areas of the Piceance Basin has reduced the herbaceous stratum to a group of sedges and herbs which are unpalatable to livestock (Vories, 1974). Ellison (1954) found that grazed riparian and wet meadow communities of the Wasatch Plateau, Utah, were also dominated by a few sedge species, while similar areas receiving less grazing pressure showed several shrub and forb species as their principal constituents. An estimated 53.5% of the ground was covered by the foliage of all herbaceous species combined.

2.3.1.4. SUMMARY AND CONCLUSIONS

Ten different vegetation types in 96 separate locations were sampled during October 1974. Resulting data have been summarized, compared to the available literature, and tentatively interpreted.

The four aspen stands sampled in the study area supported a total of at least 38 different plant species, most of which were herbaceous. Aspen was the only species encountered in the tree stratum.

Douglas fir dominated the tree stratum of all six Douglas fir communities sampled. Aspen saplings were scattered throughout these stands.

The four upland meadow sites lacked shrub and tree strata. At least 33 species were recorded for the herbaceous stratum of this vegetative type but it is certain that many other herbaceous species were dormant and thus unidentifiable during October sampling. Upland meadows sampled displayed a sparce ground cover.

At least 48 species comprised both herbaceous and shrub strata of the 13 mixed brush sites sampled. Two different species of trees (juniper and pinyon) were scantily distributed throughout the mixed brush study areas. Shrub strata analyzed at the mixed brush sites were composed mainly of evenly distributed Sagebrush and clumped serviceberry.

Distinctive tree, shrub, and herbaceous strata supporting at least 70 plant species characterized the 26 different pinyon-juniper sites samples. Understory vegetation was sparce. Pinyon (Pinus edulis) and juniper (Juniperus osteosperma)were the only two tree species encountered; juniper was dominant over all sites sampled.

At least 66 different plant species composed the herbaceous and shrub strata of the 23 sagebrush sites sampled. Well developed shrub strata (average density 13,214 stems/ha; average cover 28.8% of the ground) and sparse herbaceous strata (average cover 12.6% of the ground) characterized the sagebrush sites sampled during October, 1974.

Herbaceous, shrub, and tree strata supporting at least 24 plant species characterized the four shadscale sites sampled. Juniper was uncommon in the shadscale sites sampled.

At least 17 plant species were recorded for herbaceous and shrub strata of the greasewood sites sampled. A sparce herbaceous ground cover and relatively dense shrub layer of vegetation characterized the seven greasewood sites sampled during October, 1974.

The five rabbitbrush sites sampled in the study area supported a total of at least 15 different plant species. The herbaceous stratum afforded a relatively sparce ground cover but the rabbitbrush shrub stratum was fairly dense (9,055 stems/ha) and covered 40.8% of the ground.

The four riparian locations sampled lacked tree and shrub strata but displayed a rather dense herbaceous stratum (at least 37 species; 53.5% total ground cover).

The poor condition of many herbaceous species encountered in all vegetative types studies during October 1974 resulted in some species identification problems and may have influenced cover value estimates. In many instances calculated cover values were low relative to those reported in the literature (Fories, 1974), probably reflecting the late fall sampling during which time many herbaceous species were dormant.

Rio Blanco
Oil Shale Project

SECOND QUARTERLY DATA REPORT

OCT, NOV, DEC, JAN & FEB
FALL & WINTER 1974 -75
BOOK 5 OF 11

TERRESTRIAL STUDIES (RAW DATA)

Gulf Oil Corporation
and
Standard Oil Company (Indiana)
9725 East Hampden Avenue, Denver, Colorado 80231

2.3. Terrestrial Studies
APPENDICES (Raw Data)

2.3.1. VEGETATION (Phytosociological Investigations)

Type and File Number

- Aspen (2.2.1)
- Douglas Fir (2.2.2)
- Greasewood (2.2.3)
- Mixed Brush (2.2.4)
- Pinyon-Juniper (2.2.5)
- Rabbitbrush (2.2.6)
- Riparian (2.2.7)
- Sagebrush (2.2.8)
- Shadscale (2.2.9)
- Upland Meadow (2.2.10)

Aspen (2.2.1)

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley-Ellis Project: 83 Date: 10/15/74
Site: Permanent Length of Line: 60 m
5 R: 100W Sec.: 15 ¼ Sec.: SW SW Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: Aspen Condition of Foliage: leaves fallen
Aspect 340° Slope 9%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Potr	60	170	110	10, 13, 15,			0	0		5, 5, 4
	270	420	150	15, 15, 25,			1560	1670	60	6, 3
	500	680	130	14, 15, 13,			1850	1880	30	
	880	1140	260	13, 23			1970	2240	270	5, 4
	1220	1480	260				2930	3000	70	
			20	0					15	
	1610	1630	80				0	0	445	4, 21, 8
	1770	1850	590	13, 15, 20,						
			880	18, 18			2115	2130		
	0	590	270	15, 21, 13,						0
	1100	1980	2800	15, 29, 25,		Prunus				0
				19, 26						8
	2730	3000				Amal	1020	1050	30	1, 5, 4, 12, 18 40
							1125	1180	55	
							1320	1440	120	3, 1
							2530	2750	220	
									425	2, 3, 3
				Count			0	0		0
erglabrum	0 0 0	0 0 0					0	0		
Acer glabrum	2320	2300	20	4		SYMP	100	105	5	10, 15, 20, 8
	2870	2900	30				240	270	30	
			50				430	470	40	9, 7, 6, 12
							575	610	35	
	0	0		0			700	820	120	25, 7, 30
Ribes	2845	2850	5	15			860	900	40	
			20	2512			1180	1210	30	
	100	120	20	3, 6			1230	1280	50	3, 4
	160	180	45				1430	1510	70	
							1500	1540	40	
							1560	1650	90	
							1850	2150	300	
							2260	2360	[illegible]	
							2335	2435	100	
							2530	2660	130	
							180	280	100	
							310	360	50	
							570	660	90	
							690	720	30	
							850	1020	170	
							1040	1060	20	
							1270	1340	70	
							1340	1420	80	
							0	0	1730	
						Rosa	400	410	10	3, 4
							830	845	1015	0
							910	930	20	9, 3
							2	2	45	0
							510	520	55	
							0	0		

Shrub → Ribes

ECI

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

roject 83 Site Permanent Aspen Date 10/10/74 Size of quadrat ____

ield Analysts: Kelley - Ellis Sheet No. 1 of 1

al description of land T1S R100W Sec 15 ¼ sec SW SW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	50	75	75	40	40	75	85	25	60	5
mtn Brome Bromus	5		10		10	10		10	10	100
Carex sp	90	100	75	70	75	90	90	80	85	
umbel sp parsley	5		5							T
Fragaria	T		10	10	10			10	5	
small Erigeron				10						
large Compositae				10						
Gaho					5					
Agso							10			
Stipa columbiana							T			
Acla									T	

.2 miles North of fence gate
Cathedral Bluffs north

2.2.1-2

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Aspen permanent

Field Analyst: Eros · Ellinwood Project: 83 Date: 10/13/79
Site: Permanent Length of Line:
T: 25 R: 100W Sec.: 15 ¼ Sec.: SW¼ SW¼ Transect Direction: 295°
ral Description of Land: A 90° S·1-202
Vegetation Type: Aspen Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
span I - 12an II - 12cm, 6, 10, 21	1290 2130 120 1400	1680 2760 300 1810	290 330 680 410 1710			Aspen	610 950 1400 2450 2780 60 1750 2670	790 1070 1960 2580 2930 110 1990 2900	180 120 160 80 150 50 230 230 1200	aspen I - 21 II - 31 I - 7 II - 8
I - 20, 18, 22, II - 30, 28 15,						art.	350	390	40	
										Snowberry I - 62 II - 82
						lunis	940 980	955 985	15 5 20	I - 31 II - ~~32~~ 4 200
						Snowberry Symph 1650-1660 2695-2760 2790·2810	140 210 305 570 750 1040 1180 1310 1740 1910 2470 2760 2960 0 60 140 1280	180 280 330 600 785 1080 1270 1450 1840 1930 2680 2800 3000 40 100 240 1290	10' 40 65' 70 30' 25 30 35 20 130 120 80 20 210 30 40 40 40 120 90 1215	Serviceberry I - 1 II - 2 I - ~~13~~ 6 II - 9 chokecherry - I - 0 II - 0 I - 11 II - 0
						Serviceberry amyl. ♂	1370 1640 1670	1500 1670 1720	130 30 50 210	Artemisia I - 6 II - 0 I - ϕ II - 0
						Rose 720-750 910-960	465 1110 1710 1860 75 120 510	500 1120 1720 1870 100 150 545	15 10 10 20 25 32 145	Rose I - 29 II - 46 I - 81 II - [illegible]2 150

2.2.1-4

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project ________ Site ________ Date ________ Size of quadrat ________

Field Analysts: ________ Sheet No. ________ of ________

ral description of land Aspen - permanent

T.D. 2950 A. 90° 1-20%   T 2S, R 100W S 15 SW1/4 SW1/4

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	20	45	25	10	80	20	20	15	15	20
Aster sp.	20		10			10		50	50	
Carex	70	70	80		95	80	20			
Galium boreale	10	5						5		
Angelica sp.		5								
Bromus marginatus		5		70		T	20	30		30
Smilacina		10								
Thermopsis montana		5		10						
Thalictrum			10	10	5					5
Achillea lanulosa				5						
Geranium sp.				5				5		5
Lappula sp.						20		5		
Stipa columbiana							50			
Sisymbrium altissima								5		
Agropyron trachycaulum									50	50
Mertensia ?										5
Fragaria ovalis										5

2.2.1-2

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Aspen - Landom

Field Analyst: Ellis - Ellmwood Project: 82 Date: 10-13-74
Site: Random Length of Line:
25 R: 100W Sec.: 4 ¼ Sec.: NESE Transect Direction:
eral Description of Land:
Vegetation Type: Aspen Condition of Foliage: Browsed - Dormant
T. 25 R100W S4- NE1/4 SE

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.
spen	70	560	490		
I-20,	1240	1270	30		
	1330	1820	450		
5, 20, 15	1940	2270	330		
0	0	340	540		
	1640	2020	340		
I-12, 10	2240	2400	160		
0, 20, 15	2400	3000	600		
			2940		60
-12, 10,					130
					150
13, 12, 17					50
					40
					130
					60
, 15,					380
17, 28, 25					50
					30
19, 16, 21					70
					30
23, 17, 21					20
					30
26, 21.					2765
QED					

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Aspen	190	205	15	Aspen. I-10
	220	235	15	II-3
	280	320	40	
	550	630	80	
			150	I-2
	0			II-0
Ribes	2410	2430	20	
	2940	2970	30	
			50	Currant I-0 Ribes I-0
Snowberry Symph.	0	130	130	
	170	290	120	I-0 ~~II-11~~
260 - 420	270	520	150	
570 - 700	690	710	30	Snowberry. I-61
790 - 940	870	885	15	II-71
1000 - 1040	970	1110	140	
1090 - 1220	1240	1275	35	I-58
1370 - 1440	1405	1415	10	
1300 - 1690	1500	1535	35	II-30/n
1730 - 1780	1690	1770	80	
1910 - 1940	1810	2190	380	
2070 - 2140	2220	2280	60	Rose. I-1
2340 2370	2320	2370	50	II-29
2450 2470	2400	2590	190	
2470 3000	2690	2700	20	
	240	270	30	I-17
	290	320	70	II-30
Prunus Chokecherry.	780	795	15	
	920	950	20	
	1070	1090	20	Serviceberry. Amel I-0
	1215	1250	35	
	1510	1525	15	II-6
	1630	1690	60	
	2545	2570	25	I-7
	2620	2650	30	
	2370	2490	250	II-8
Serviceberry	2910	3000	90	
	470	560	90	
	2520	2570	50	Prunus.
	2620	2700	80	Chokecherry
			310	I-27 II-49
Rose	0	120	120	
	2320	2325	5	I-3
	2910	2930	20	II-31
	140	220	80	45
	290	320	30	
	2570	2580	10	
	2770	2880	110	
			415	

ECI

2.2.1-6

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site _____ Date 10-13-74 Size of quadrat _____

Field Analysts: Ellis Ellinwood Sheet No. _____ of _____

Legal description of land RANDOM ASPEN

A·35° T.D·310° S.320 T. 2S· R. 100W S. 4 NE¼ SE¼

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total cover	5	5	5	10	10	10	20	30	20	5
Viola sp. ✓		10								
Carex sp. ✓	40	80	90	90	80	100	85	90	95	
B. ciliatus	20	5		10	10		10		5	40
Thermopsis montana		5								
Thalictrum	40									
Achillea lanulosa			10				5			
Aquilegia sp.					10					40
Gal boreale								5		20
Stipa columbiana							5			
Smilacina							T			
Fragaria							5			

K

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: EK + SLE Project: 83 Date: 10/11/74
Site: CATTORIA BLUFFS, 8450' RANDOM Length of Line: 1 / 20
T: 1 S. R: 100W Sec.: 33 ¼ Sec.: SE¼ SE¼ Transect Direction:
eral Description of Land:
Vegetation Type: ASPEN Condition of Foliage:
[illegible] 24% [illegible] 15% 15' 30 m

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species 3-4 m	I_1	I_2	I_2-I_1	Number Per 50' Units
							(12 ft)	30 m		
Popr aspen				11			310	450	140	5,4,3,1 14
				11,10			610	595	25	10,14,17, 47
							1330	1480	150	14
							1660	1890	230	17
							2420	2700	280	78
							2760	2800	40	
							2960	3000	40	
									965	
Querqa Gamble oak							1190	1340	150	12
symp							430	445	15	10,13,7,3
							1550	1610	60	4,9,11,5 67
									75	
									505	
									580	97
										58
Ama'							70	74	4	5,4,18,23,27
							268	273	5	21,23,26 54
							530	680	150	Tot 173
							740	1190	450	
							1615	1780	165	
							1970	2180	210	
							2270	2420	150	
							2830	2890	60	
							2910	2930	20	
							2960	2990	30	
									1244	

ECI
ecology consultants,

2.21-8

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Keller – Ellis Project: 77 Date: [illegible]
Site: Random Length of Line: [illegible]
T: 15 R: [illegible] W Sec.: [illegible] ¼ Sec.: SW [illegible] Transect Direction:
General Description of Land:
Vegetation Type: Aspen Condition of Foliage: [illegible]
Aspect NE [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
POTR	160	345	185	11, 11			0	108	108	6,3,4,10,10,
	345	520	175	11			170	180	10	16,21,6
	2440	2660	220				1340	1380	40	
			580				1490	1590	100	178
							1500	1690	190	76
							1840	2020	180	154
							2240	2250	10	
							2680	2730	50	
							2850	2910	60	
									748	
									965	
									1713	
						1244 965 2209				
Amal							80	110	30	25, 47, 35, 10 3
							160	170	10	
							205	220	15	
							330	760	430	20,9,26,17,9
									50	
							700	750	50	
							2340	2430	90	
							2560	2610	50	
							2730	2900	170	
							2930	3000	70	
									965	
Symp						15	240	255	2250-2340	
						80	840	1320	2430 2520	11,5,2 } 100
						30	1360	1390	2930 - 3000	18,5,35,8,16
						30	1460	1490		2 26
						20	1610	1650		2 41 35 180
						20	1840	1860		2 79 16 35 [illegible]
						180	2000	2180		
						90				
						90				
						50				
						505				3,11,5,4
Prunus							1080	1200	120	
							1340	1360	20	
							1420	1450	30	
									20	
									20	
							1730	1750	210	
							1780	1800		

ECI

2.2.1

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project______ Site______ Date 10/11/79 Size of quadrat______

Field Analysts:______ Sheet No.______ of ______

Legal description of land Aspen, Random T 1S, 100W, 33 SW 1/4 SE 1/4

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
TOTAL COVER	30	10	40	30	15	30	15	20	30	20
CAREX sp geyeri	95	50	90	95	80	90	60	25	80	100
[illegible]	5	50	10		20			15		
Gallium				5			30			
[illegible] sp. ?						10				
Thalictrum						1	10	5		
[illegible] sp.								5	20	
Arctostaphylos sp.										

Douglas Fir (2.2.2)

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: SCE SE Project: R3 Date: 10/13/74

Site: Permanent Length of Line: 60m

28 R: 160W Sec.: 5 ¼ Sec.: NE¼ SW¼ Transect Direction: 325

General Description of Land:

Vegetation Type: doug. fir - perm. Condition of Foliage:

Aspect 350° Slope 15%

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.
Aspen. I-13					
[illegible]n.	1110	1750	640		?
I-21	1890	2440	590		
II-20	2640	2810	130		
-14	350	1790	1440		?
-12	[illegible]				
-10	2540	2880	340		
-10			3140		
-23					
-10					
-20					
-20					
-17					
-11					
-10					
I- 30					
28					
30					
15					
29					
23					
II - 12 18					

30 30

18 28

20

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Chokecherry	30	60	30	Chokecherry - I -
2440 2520			80	Pru. Vir. II - (
	100	120	40 20	
200 - 240	170	190	140 40	I - 32
470 - 800	370	410	30 190	II - 0
570 - 615	440	630	75 150	
~~7??~~ -	690	860	2100 110	
	870	980	60	
	1040	1100	95	
	1200	1295	20	
	1340	1360	140	
	1430	1570	530	
	1170	2000	60	
	2220	2280		
Amel.	520	550	20	Amelanchier I - 2
	1000	1020	30	Service berry. II -
	2980	2920	40	I - 14
	720	840	120	II - 9
	1240	1310	70	
	1550	1690	140	
	2640	2740	100	
	2485	3000	115 685	
Snowberry	230	340	110	Snowberry I - 4
Symp	400	470	70	Symp. II - 2
2000 - 2045	640	681	25 30	I - 70
2440 2470	1220	1280	30 50	
2740 2810	1710	1750	20 40	II - 31
	1790	1840	390 50	
	2100	2125	25	
	2400	2440	40	
	550	590	90	
	935	960	25	
	1210	1225	15	
	1840	1860	20	
Rose	1300	1325	25	Roses - I - 26
	2175	2190	15	II - 3
	2275	2290	15	I - 21
	460	480	20	II - 30
	650	660	10	
	835	860	25	
	890	915	25	
	990	1010	30	
	2550	2900	20 175	
Aspen	640	690	50	Aspen I - 2 II - 0 I - 0 II - 0
Doug. Fir	2310	2430	300	Doug Fir - I - 0 II - 2

1390	1510	100 65	II - 5
1550	1615	35 490	II - 29
1710	2215	1090	

ECI

2.2.2-2

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: SCB SB Project: 83 Date: 10/13/74
Site: Permanent I Length of Line:
T: 2S R: 100W Sec.: 15 ¼ Sec.: NE¼ SW¼ Transect Direction: 320
General Description of Land:
Vegetation Type: Doug. fir - PSEM Condition of Foliage:
Aspect 350° Slope 15%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Rocky Mt. [illegible] lab.				Rocky Mt. maple Hs. Lab. I-0 II-0 I-0 II-5

2.2.2-2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Permanent Doug fir Date 10-13-79 Size of quadrat ______

Field Analysts: Ellis Ellkwood Sheet No. ______ of ______

Legal description of land Douglas Fir. T 2S, 100W, S15 NE1/4 SW1/4
T.D. 325° A350° S.11-15%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	25	60	30	30	25	20	30	20	15	40
Arctostaphylos	70	10								
Carex Sp.	30	85	100	100	95	100	95	100	100	100
Ga boreale		5			5					
Thalictrum Sp.							5			

ECI

ecology consultants, Inc.

K 2.2.2-9

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis- Ellwood Project: 83 Date: 10-13-74
Site: Permanent Length of Line: 60 m
T: 1S R: 100W Sec.: 28 ¼ Sec.: NW¼SE¼ Transect Direction: 300°
ral Description of Land: A 320°
Vegetation Type: Doug. Fir perm. Condition of Foliage: Dormant.

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
ug Fir	0	800	800			Oak-	2120	2125	5	Oak-I-14
	970	3000	2030				2160	2180	20	II-67
I-31,11,	0	1240	1290				2220	2250	30	
12, 25, 12	1490	2570	1390				2320	2340	20	I-47
5, 27, 25			5510'				260	290	20	II-0
							460	500	40	
II-20,25							520	570	10	
10, 12,25									145	
30,										Sarvis berry I-4.
						Servisberry	250	290	40	II-5.
-15,28							140	170	30	I-1
, 40							2440	2540	50	
							2790	3000	210	II-17
									330	
I-16, 12,						Doug fir	1490	1490	10	
20, 10, 19							2530	2600	70	
19, 16, 15									40	
,						Rose……				
										Doug Fir. 2 II-2
										I-26 II-9
						Symp……	910	1010	100	
					20	2360-2380	1650	1710	60	
					15	2445-2460	1770	1800	30	Snowberry. I-2
					10	2560-2570	1930	1940	10	
					20	2610-2630	1920	1960	30	II-72
							2000	2040	40	I-72
					540		2085	2100	15	
							2850	2860	10	II-38
									50	
							320	370	60	Rose I-0
							930	990	30	
							1300	1330	10	II-11
							2110	2120	30	I-8
							2240	2270	475	II-0

L.L.L.2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project________ Site________ Date 10/13/74 Size of quadrat________

Field Analysts: Ellis - Ellzwood Sheet No.______ of ______

Legal description of land Dougls Fr permanent

T.D 300° A. 320° 5% T. 1S. R. 100W S. 28 NW¼ SE¼

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
total cover	10	7	15	15	3	2	3	0	3	40
Larix (overstory)	95	85	80	40	75	100			80	95
Arctostaphylos uva-ursi	5		20		20			1 Her		
Galium boreale		5								5
Astragalus sp		10	~~12~~	10	5		70			
Carex sp (narrow leaf)				30			30	↓		
Aster sp				10						
Berberis repens									20	

Berberis repens

ECI

ecology consultants, Inc.

2.2.2-6

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: FK & SLF Project: 82 Date: 10/11/74
Site: Permafrost Length of Line: 30 m at 60
[illegible]5 R: 100 W Sec.: 34 ¼ Sec.: NW NW Transect Direction: 95°
General Description of Land: Head of Canyon
Vegetation Type: Douglas fir Condition of Foliage: good
Aspect 335° Slope 18%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Doug fir	100	805	705	35		SYMP	130	145	15	35, 18, 7, 23
	960	1500	540	25			320	480	160	52, 69
	1500	1520	20	33			690	730	40	
	1805	3000	1195	30			900	920	20	
			2460				1010	1105	95	
							1170	1280	110	
							1540	1580	40	
							1590	1620	30	
							1670	1680	10	
							1810	1850	50	
							1890	1930	40	
							1990	2060	70	
									680	
						Prunus				4, 3 0
						Amal				0 14
						Rosa				0 2

Photo #3 w along transect.

ECI

2.2.2 - 7

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: E3 Date: [illegible]
Site: Permanent Length of Line: [illegible]
T: [illegible] R: [illegible] Sec.: 34 ¼ Sec.: NW NW Transect Direction:
General Description of Land:
Vegetation Type: Doug Fir PP/GM Condition of Foliage: [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Doug fir	0	130	130	0		Doug fir				2
	470	1010	540							
	1230	1500	270							
	1500	2330	830	.27, ~~mature~~	5.714	Amal				4
			1770	.43						16
			2460				2005	2440	435	
			4230				2875	2920	45	
							2960	3000	40	
									520	
						Symp	120	140	20	47, 32, 17
							220	370	150	
							405	620	215	37, 14, 27, 13
							640	680	40	
							830	920	90	39,72
							1120	1260	140	
							1295	1435	140	
							1460	1500	40	
							1500	1760	260	
							1860	1910	50	
							2225	2275	50	
							2440	2475	35	
							2460	2495	35	
							2540	2590	50	
							2670	2680	10	
							2770	2870	100	
									1425	
									680	
									2105	

ECI

2.2.2.-8

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Permanent Coug. Cr Date 10/11/74 Size of quadrat

Field Analysts: SLB & EK Sheet No. 1 of 1

Legal description of land Arapaho NF, T. 1S. R 10[illegible]W S. 34 NW1/4 NW1/4

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Grd cover	10	15	20	40	10	10	30	10	25	20
Carex	100	100	95	100	95	100	100	100	80	90
Erigeron sp.			5							
[illegible]					5					
Thermopsis montana									20	5
Galium boreale										5

mountain ash,
Elymus cinereus.

Porcupine damage on small fir.

2.2.2-8

222.-9

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis · Ellinwood Project: 83 Date: 10-12-74
Site: Rainbow — Length of Line:
T: 25 R: 100W Sec.: 10 ¼ Sec.: SW SW Transect Direction: 255°
General Description of Land: Steep Slope — grass- dense service berry.
Vegetation Type: Douglas fir Condition of Foliage:
A. 335°
Slope 25%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Doug fir	330	1540	1210			Service Berry	240 ~~240~~	~~260~~	? ?	Service berry I-22 36
I-21, 25	1530	3000	1470				450	520	70	I-58
	~~1130~~	~~2270~~					690	920	230	II-184
12, 25, 10							1450	1500	50	I-223
II-4, 73,	0	750	750				1500	3000	1500	II-224
17, 20, 16	800	1000	200				2120	2070	~~3010~~ 2440 Blank	
	~~0~~ ~~800~~	~~750~~ ~~1000~~	200				Cover	Continuous		
3,	1780	2270	490							Doug fir. I-4
II-12, 13	2460	2740	280							I-6
10, 12,			4600							II-8
12 15										I-1 II-1
12, 21										
						Snowberry..	040	060	20	
										Chokecherry - I-2
										Snowberry Symp - II_2 - 6
						Doug fir...				Rose ~~Bous~~ II_2 - 5
						Chokecherry				

ECI

ecology consultants, inc

2.2.2-10

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project F3 Site Random Doug fir Date 10/13/74 Size of quadrat

Field Analysts: SLB - SF Sheet No. 1 of 1

al description of land T2S, R.100W, S 10 SW 1/4 SW 1/4

Doug fir - random T.P -35° A 235° S.2

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0	
Total Cov	7+	75	40	40	25	20%	40	25	25	80%	80
Carex sp	80	100	100	100	100	100%	100	90%	95%	100	100
[illegible]	10							20			
Bromus ciliatus									5%		
~~[illegible]~~								~~20~~			

2.2.2-10

ECI

ecology consultants, inc.

2.2.2-11

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: SLE-FK Project: 53 Date: [illegible]
Site: [illegible] RANDOM Length of Line:
T. 13 R: 99W Sec.: 33 ¼ Sec.: NE¼ NE¼ Transect Direction: [illegible]
General Description of Land:
Vegetation Type: Doug Fir [illegible] Condition of Foliage:
ASP[illegible] 20° [illegible]

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.
Doug fir	170	610	440,	[illegible] 15	0
1	625	1290	665	37	
	1310	1500	190	28	
	1500	1820	320 2	40	
2	2580	3000	420 3	15	
	0	430	430		
3	580	740	160	12, 12	
			110	10	
4	1830	1940			
	2620	2650	60		
			2795		

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units	
Doug fir 1				1,1	5
2	2980	2995	15	1	
				2,2,3,	1,
3					
	2650	2675	25	2	1,
			40		5
Amel	250	350	100	8	
1	780	930	150		
	1930	1933	3	6	
2	1935	1971	10		
	770	820	50	6, 7, 4	
3	1260	1370	110		
			409	6	
SYMP	380	465	85	18, 10, 11	
1	1105	1135	30		
	1410	1460	50		
	1980	2005	25	6, 4, 25	
2	2230	2245	15		
	[illegible]	[illegible]	90		
3	130	270	140	18, 12	
4	2220	2255	35	13, 20	
	2870	2880	10		
	2970	3000	30		
			510		
Pipr 1					
2					
3					
4	2670	2730	60	3	
Artr 1				0	
2				0	
3	1008	1020	12	8	
	1350	1360	10	5, 15	
	1750	1860	110		
4	[illegible]	[illegible]	50		
			182		

ECI

ecology consultants

2.2.2-1

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Random Douglas fir Date 10/11/74 Size of quadrat

Field Analysts: SLR - RK Sheet No. 1 of 1

Legal description of land Douglas fir - Random T.1S. R 100 W, 33 NE¼ NE-¼

[illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	10	5	10	15	0	10	15	50	5	50
Galium boreale	50	10	30	5		10		15	40	75
Carex sp. (broad leaf)	50	40		35		5	15	65		70
Aster sp.		50	50	50		15	5	15	10	
Vicia americana			20				80			
Ag. smithii				10		10				5
Bromus marginatus						5			50	
Poa sp.						5				
Smilacina sp.								10		
Achillea lan										5
Arctostaphylos										15

ECI

ecology consultants, Inc.

2.2.2-13

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley - Ellis Project: 87 Date: 10/10/74
Site: Rawlins Length of Line: 30 m
T: 15 R: 100 W Sec.: 9 ¼ Sec.: SW NE Transect Direction: 357°
General Description of Land:
Vegetation Type: Doug fir Condition of Foliage: Good
Aspect 330° Slope 12%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Doug fir	0	1470	1420	38,29,9		Doug fir				2
			840	32,13,31,						7
	1600	2440	490	24,22,19,						4
	2510	3000	230	30						3
			1250							
	0	230	120	15,30,10,						
			200	30,30,15						
	250	1500	640							
				30,85,10,						
	1500	1620	5190	11,11,16						
	1810	2010		45						
	2090	2730								
						Amal	1390	1500	110	3,2
							1500	1840	340	5
									450	6
										6,9,3
						Samp	0	0		7
							2070	2090	20	5
										23
										41

2.2.2-13

2.2.2-14

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Random Camp Six Date 10/10/74 Size of quadrat

Field Analysts: Kelley - Ellis Sheet No. 1 of 1

Legal description of land T1S R100W Sec. 9 ¼ Sec SWNE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	5	5	0	10	20	5	5	10	20	15
Erigeron sp	80									
Poa	20									
Carex		100		100	90	100	100	100	75	50
Salix					10					5
Arctos									20	
Fa. Compositae									5	45

ECI

ecology consultants, inc.

Greasewood (2.2.3)

✳ 2.2.3-1

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: E. Ellis Project: 83 Date: 10-13-74
Site: — C-a Permanent X Length of Line: 60 meters - aspect 170° Slope
[illegible] 15 R: 99W Sec.: 32 ¼ Sec.: SW¼ of NE¼ Transect Direction: 60°
General Description of Land: 75' S of Rd. East End Pl. Near water Rd. - ll to Rd.
Vegetation Type: Greasewood Condition of Foliage: Dormant - autumn
Pristine 0.85 mile East of C-a boundry-

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
		Atr	30' 25' 30' 20' 30' 20' 55' 5' 40' 120'		1/0-30 150-180 225-310 415-480 595-610 755-855	Ad. Tri 2990-1000 .670 2790 2635-2675 2605-2610 2430-2485	1390 1540 1690 1820 2125 2250	1420 1565 1720 1910 2175 2290		Ad. Tri I-27 II-54 I-60 II-89 Total 230
			30' 30' 30' 195' 65' 15' 100' 15'	2940-2950	1555-1570 1600 1650 1750-1770 1875-1900 1955 1970 2010 2065 2149 2175 2560 2590	Htr. Can	1720	1760	40	Hlrp. Can. I-3 II-4 I-0 II-0 Total 7
			80 20' 25' 20' 55' 100' 30' 10' 1162		1/620-710 910-1030 1150-1225 1665-1695 2440-2450	Sarc. ve. Greasewood	735 1670 1790 2235 2290	820 1730 860 2240 2300	85' 60' 80' 5' 20 90 170 75 30' 10' 625	Sar. ve. I-9 II-25 I-26 II-41 Total 103
					1/490-500 710-715 1650-1655 1480-1525 2490-2500 2665-2710	Chry. Na. 160 10 15 35 120	1590 2085 2790 2715	1150 2095 2805 2750		Chry. na. I-17 II-46 I-61 II-67 Total 191
						Chry. Nau. Hyperowan	190	260	70	Chry. nau. I-8 II-0 I-0 II-0 Tot. 8
						Juniper Os. Juss.				Osteosperma I- II-0 I-0 II-0 Tot. 1

ECI

2.2.3 - 2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site ______ Date 10/12/74 Size of quadrat ______

Field Analysts: SLE & SE Sheet No. 1 of 1

General description of land Greasewood - Sage - [illegible] T1S R99W Sec 35 [illegible]
T.D. 60' Orient 170°, Slope: 120

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOTAL COVER	0	2	0	3	0	5	5	0	5	0
Brom tect		50	T	100	T			100		T
Elymus cinereus						100				
Agropyron smithii							100			

695
0

ECI
ecology consultants, Inc

2.2.3

2.2.3.-3

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Ellinwood Project: #3 Date: 10-15-74
Site: C-C Permanent ON site Length of Line: [illegible]
T: [illegible] R: 99 W Sec.: 34 ¼ Sec.: SE¼NW¼ Transect Direction:
General Description of Land: flat - [illegible] - dry - dense covered sand
Vegetation Type: Pattern and ~~[illegible]~~ Greasewood Condition of Foliage: Dormant — seeding

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
							20	90	70	Sarcobatus
						aster	100	140	40	I-10
						1000-1060	2[illegible]	[illegible]	100	II-15
						1[illegible]-1350	[illegible]	[illegible]	250	
						1310-1600	670	700	30	I-8
						1780-2320	740	800	60	II-8
						2330-2[illegible]	880	940	60	
						[illegible]-[illegible]	1010	1045	35	
						2640-2695	1070	1[illegible]0	110	
						2770-28[illegible]	1260	1240	80	
						2920-3000	1550	[illegible]	90	
							1690	1840	150	
							1920	1990	70	Artemisia I-[illegible]
							2120	2140	20	II-99
							2220	2265	45	
							[illegible]	2370	20	I-108
							2[illegible]0	2640	180	II-112
							2570	[illegible]	20	
							0	50	40 50	
							140	215	140 75	
							260	300	210 40	
							[illegible]	[illegible]	540 80	
							[illegible]	[illegible]	10 20	
							[illegible]	[illegible]	10 45	
							[illegible]	545	50 50	
							642	695	110 25	
							745	770	80 90	Atriplex - I-0
							840	9[illegible]	3095	II-2
						Sarcobatus.	2150	2170	20	I-
							2300	2340	20	I-
							2550	25[illegible]	50	
							2725	2740	15	
									40	
							260	300	145	
										Chrysothamnus nauseosus I-0
										II-0
										I-0
										II-1

ECI

2.2:3-4

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

roject 83 Site PERM. Date 15 OCT. 74 Size of quadrat ____

ield Analysts: ELLIS - ELLINWOOD Sheet No. ____ of ____

ral description of land MIXED ~~[illegible]~~ - GREASEWOOD - (BOTTOMLAND)

T.D. 110° A. 160° S. 8% T. 15 R. 99N S. 34 -SE N

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
T. Cover	0	0	0	0	0	0	0	0	0	1
Ag. trachy										50
Drabasp										50

P. Perm. Greasewood

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

2.2.3-5

Field Analyst: Ellis - Ellwood Project: 83 Date: 10-15-74
Site: Buck Creek Permanent Length of Line: 60 meters
T: 15 R: 19W Sec.: 12 ¼ Sec.: SE¼NE¼ Transect Direction: 165
General Description of Land: Aspect - 155° - Slope 5%
Vegetation Type: - Mature Greasewood Condition of Foliage:
- Young sage

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Artr	290	310	20	Sarcobatus - I - 58
2490-2495	470	480	10	II - 62
2600-2700	760	770	10	
2850-2970	805	820	15	I - 79
	1305	1320	15	II - 72
	1505	1560	55	
	2120	2170	50	
	2590	2670	80	
	2720	2770	50	
	2560	2580	20	Artemisia I - 172
	2440	2500	60	II - 161
	125	165	40	
	225	300	100	I - 118
	[illegible]	[illegible]	20	
	[illegible]	[illegible]	40	II - 110
	[illegible]	755	75	
	1000	[illegible]	25	
	1190	[illegible]	80	
	1320	1330	390	
	1390	[illegible]	75	
	1630	[illegible]	45	
	1920	1940	40	
	2090	2120	80	
	2390	[illegible]	20	
			20	
			100	
			35	
			1570	
Sarco	270	340	75	
1740-1790	475	480	50 5	
1470-1880	655	685	10 30	
2230-2375	820	860	45 40	
2440-2510	1080	1200	20 220	
2730-2850	1335	1340	160 15	
2795-2910	1590	1550	25 160	
	1600	1720	40	
	1780	1870	90	
	1790	2150	150	
	2200	2300	60	
	2260	2450	130	
	2630	2660	30	
	2735	2850	120	
	600	[illegible]	10	
	660	670	10	
	1250	[illegible]	40	
	1320	[illegible]	20	
			1605	

ECI

2.2.3-6

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Permanent Date 15 Oct 74 Size of quadrat ______

Field Analysts: Ellis - Ellinwood Sheet No. ______ of ______

al description of land Greasewood T.15 R.95W S.10 SE NE

(Clay windmill, Dark Cr.) T.D'165 A.155° S.12%

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total Cover	1	5	5	5	5	5	2	2	3	1
Ag. trachycaulum	100	100	60	80	100	100	100	100	100	100
Sitanion hystrix			40	20						

ECI

ecology consultants, inc.

2.2.3 -7

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis · Baker Project: 83 Date: 17 Oct 74
Site: Random – on site Length of Line:
T: 5 R: 49 W Sec.: 24 ¼ Sec.: SW SE Transect Direction: [illegible]
General Description of Land: Undulating Grassland
Vegetation Type: Grassland Condition of Foliage:
aspect ~~[illegible]~~ 130 Slope 3°

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.
	2310	2360	50		
	2610	2640	30		
	2720	2730	10		
	2350	2400	50		
	50	120	70		
	240	260	20		
	320	390	70		
	470	530	60		
	555	620	65		
	715	835	120		
	935	1070	135		
	1140	1180	40		
	1270	1350	80		
	1440	1465	25		
	1560	1585	25		
	1720	1740	20		
	1895	1990	95		
	2015	2120	105		
	2170	2210	40		
	2250	2290	40		
	2310	2350	40		
	2450	1470	20		
	2580	2595	15		
	2670	2720	50		
	2755	[illegible]	40		
			2030		

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Artemisia	70	110	40	I_1 171
	230	310	80	II_1 178
	320	330	10	I_2 190
	420	435	15	II_2 198
	590	600	10	
	715	725	10	
	765	810	45	
	1055	1095	40	
	1180	1250	70	
	1270	1300	30	
	1330	1370	40	
	1450	1500	50	
	1605	1615	10	
	1625	1670	45	
	1690	1710	20	
	1900	1940	40	
	2020	2180	160	
Sarcobatus	0	40	40	I_1 31
	120	190	70	II 23
	260	350	90	I_2 19
	480	590	110	II_2 10
	820	850	30	
	890	910	20	
	1120	1240	120	
	1235	1300	65	
	1450	1480	30	
	1535	1570	35	
	2160	2420	260	
	2490	2550	60	
	2780	2860	80	
	1145	1165	20	
	1290	1315	25	
	2300	2340	40	
	2350	[illegible]	110	
			1205	
C. nanus	2080	2100	20	I_2 5
[illegible]				I_1 1

ECI

2.2.3-8

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 03 Site Pardon Date 17 Oct 74 Size of quadrat

Field Analysts: Bartell Ellis Sheet No. of

Legal description of land Cottonwood 15. 99W S. 34 SwSE

T.V. 50° A. 130' S. 300

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	1	0	0	0	0	0	0	20	0	30
Sitanion hystrix	100									
Silver Sage								100		100

Many Small Sage worden died

Sage chicken clumps

ECI

ecology consultants, Inc.

Nandum - GW

2.2.3-9

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Ellenwood Project: #3 Date: 10-15-74
Site: - Duck Creek - Greasewood Length of Line: 60 meters.
T: 15 R: 97W Sec.: 12 ¼ Sec.: SE¼NW¼ Transect Direction: [illegible]
General Description of Land: Gullies - Flat - Valley, Gravel [illegible] Slope [illegible]
Vegetation Type: Greasewood - Sage Condition of Foliage: Dormant - Seeding

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Saro.	170	195	50 .25	Saro. I - 81 II - 52
						190-240	400	425	100 .25	
						400-500	510	525	25 .15	I - 62 II - 62
						795-820	580	610	165 .30	
						970-1135	750	850	15 .100	
						1385-1400	910	925	160 .15	
						1450-1610	960	980	20 .20	
						1680-1700	1050	1090	40 .40	
						1830-1870	1380	1410	60 30	
						2010-2070	1590	[illegible]	35 .20	
						2090-2125	1755	1770	310 15	
						2070-2250	1855	1950	20 .95	
						2350-2370	2010	2090	55 .80	
						2540-2595	2190	2270	115 .80	
						2705-2820	[illegible]	2330	80 .50	
						2910-2990	[illegible]	[illegible]	.40	
									1820	
						ante.	080	135	55	ante. I - 59 II - 7
							390	430	40	
							885	900	15	I - 6 II - 2
							1050	1150	100	
							1350	1375	25	
									235	
						Atriplex Cana.	1410	1415	5	atriplex - I - 6 II - 1
										I - 1 II - 3

ECI

2.2.3-10

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site RAUDOU Date OCT. 14, 74 Size of quadrat

Field Analysts: ELLIS ELLINGWOOD Sheet No. of SE

General description of land GREASEWOOD T. 1S R. 99W S 12 ~~[illegible]~~ NW

T.D. 170 A. 110 S-6/2

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total Cover	1	3	3	1	2	1	2	3	1	2
Ag. trachy	100	100	100	100	100	~~100~~ 80	100	80	100	100
Lappula redowskii						20				
Poa-like sp.								20		

ECI

ecology consultants, Inc.

// *
Random — Greasewood

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

2.2.3 – 11

Field Analyst: Ellis- Ellwood Project: 93 Date: 10-15-74
Site: Dart Creek - Length of Line: 60 meters
T: 15 R: 94 W Sec.: 9 ¼ Sec.: SW¼NE¼ Transect Direction: 125°
General Description of Land: Aspect 160° — Slope 2%
Vegetation Type: Greasewood Condition of Foliage: Dormant

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Sarcob.	680	750	70	Samples
							1250	1280	30'	I-29
							1590	1670	80'	II-21
							1945	2030	85'	
							2370	2400	30'	I-32
							2760	2780	20'	II-51
							2910	2980	70'	
							455	500	45'	
							720	840	120'	
							1120	1160	40'	
							1320	1350	30'	artr. I-29
							1395	1420	25'	II-28
							1510	1590	80'	
							1560	1595	35'	
							1960	1985	25	I-38
							2290	2400	110'	II-34
							2460	2560	100'	
							2760	2920	160'	
									1155	
						artr.	640	670	30'	Agy. Virid. I-6
							1090	1110	20'	II-0
							1780	1910	130'	
							2320	2350	30'	I-0
							2400	2440	40'	II-6
							2470	2480	10'	
							2600	2670	70'	
							2780	2910	130'	
							2980	3000	20'	
							030	080	50'	
							130	220	90'	
							340	350	10'	
							540	600	60'	
							1070	1120	50'	
							1830	1840	10'	
							1980	2025	45'	
							2120	2170	50'	
							2240	2320	80'	
							2580	2620	40'	
							2700	2740	30'	
									995	

2.2.3-12

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site RANDOM Date 15 Oct · 74 Size of quadrat ____

Field Analysts: Ellis Ellikwood Sheet No. ____ of ____

General description of land Greasewood T. 1S R. 98W S. 9 SW NE

T. D. 195° A. 160° S. 2%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	20	15	15	10	25	20	10	15	10	15
Lepidium sp.	100	100	100	100	100	100	100			100
Kochia scoparia ~~[illegible]~~ sp								100	100	

2.2.3-12

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

2.2.3.-13

Field Analyst: Yellow - Ellis Project: #3 Date: 10/17/74
Site: [illegible] on site Length of Line: [illegible]
T: 2S R: 99W Sec.: 9 ¼ Sec.: NE NE Transect Direction: 35°
General Description of Land: [illegible] slope
Vegetation Type: [illegible] Condition of Foliage: [illegible]
Aspect 110 slope 10%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft. No. Per Unit	Species	I_1	I_2	I_2-I_1	Number Per 50 Units
Artr	0	30	30		13,10,11,8,3		30	70	40	15,8,9,8,4
	333	370	37				450	480	30	~~17,12,10,11~~
	420	465	45				580	600	20	
	510	570	20		12,5,9,7		660	690	30	
	930	955	25		18		1330	1360	45	53,46
	1050	1140	90				1230	1275	30	
	1195	1210	15				1580	1620	40	
	1245	1340	95		120		1670	1690	20	
	1400	1500	100				1715	1750	35	
	1500	1520	20				1905	2080	175	
	1575	1620	45				2110	2180	70	
	1640	1740	100				2220	2320	100	
	1900	1940	40				2350	2360	10	
	1960	1980	20				2440	2540	100	
	2040	2070	30				2640	2740	100	
	2120	2210	90				2880	2930	50	
	2320	2390	70						895	
	2485	2600	115						1082	
	2695	2860	65						1977	
	2920	2950	30							
			1082							
Save	280	290	10		3,6,4,7,4					9,10,12,8
	390	450	60		3,10,11	67				5,8,14,4 106
	490	500	20							
	720	750	30				0	30	30	18,18
	955	965	10		3,4,5,11		90	120	30	
	1020	1080	60				490	560	70	
	1270	1340	70				650	770	120	
	1410	1450	40				890	930	40	
	1610	1630	20				1010	1130	120	
	1865	1895	30				1190	1300	110	
Atco	1945	2000	55		2		1540	1560	20	
	2450	2490	40				1960	1970	10	
	2500	2545	45		2,3		2010	2020	10	3,2,4
	2951	3060	80				2130	2140	10	
			510		1,1,1		2770	2810	40	6,5
							2830	2840	10	
							2940	2975	35	
									655	
									510	
Chva					1,3,2,2					2,1,4
					2,1					
					3,2,3,3					8,2

2.2.3-14

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Carlson Date Mact Size of quadrat ____

Field Analysts: Kelley Ellis Sheet No. ____ of ____

ral description of land Greasewood. T. R. S.

A 110° T. D. T2S R99W Sec 8 NENE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	0	5	5	15	10	30	10	20	3	30
Ar. tridn	T								100	
Sa. ver.		100	100	100	100	100	100	100		100

2.2.2-14

Mixed Brush (2.2.4)

1 A

2.2.4-1

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: E11 B. Baker Project: 83 Date: 10/16/74
Site: Permanent on site Length of Line:
T: 25 R: 99W Sec.: 8 ¼ Sec.: NE of NW Transect Direction: 340
General Description of Land: [illegible]
Vegetation Type: Mixed Brush Condition of Foliage:
[illegible] 340 [illegible] 10%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Big Sage	360	380	20	I 52
							410	440	30	II 68
							525	535	10	
							685	750	65	
							835	910	75	
							1150	1230	80	
							1280	1300	20	
							1510	1535	25	
							2040	2155	115	
							2260	2345	85	
						[illegible]	2865	2910	45	
									570	I 21 II 23 I 20 II 21
						[illegible]	1375	1440	65	I 1
							[illegible]	[illegible]	50	II 3
									115	I 11 II 7
						[illegible]	790	[illegible]	80	I [illegible]
							950	[illegible]	50	II 41 56
							1540	1570	30	
							1720	1800	80	
							1820	1900	80	
							2350	2570	220	
							2940	[illegible]	60	
									[illegible]	
						[illegible]	1800	1820	20	I 11
							1900	1995	95	I 41
							2105	2160	55	52
							2605	2620	15	
									115	
						Pinon	785	815	30	I 1 I 1 I 2

ECI

2.2.4-2

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Baker Project: E3 Date: 10/16/74
Site: Permanent Length of Line:
T: [illegible]5 R: 90 W Sec.: 8 ¼ Sec.: NE of NW Transect Direction:
General Description of Land:
Vegetation Type: Mixed Brush Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Big Sage	240	280	40	I 61
							740	770	30	II 31
							750	780	30	
							1195	1240	45	
							1325	1345	20	
							1580	1680	100	
							2300	2320	20	
									285	
									570	
									855	
						Service berry	0	235	235	I 26
							1680	1875	195	II 26
							1960	1975	15	
							2320	2390	70	
							2640	2690	50	
									565	
									540	
									1105	
						Snowberry				I 2
										II 3
										I 0
						Juniper				I 2

ECI

2.2.4-3

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 20 Site [illegible] Date 10/16/74 Size of quadrat ______

Field Analysts: Ellis Baker Sheet No. ______ of ______

Legal description of land Mixed brush T 2S R 99W S 8 NE NE

A. 340° T. n. 340 S [illegible]

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total Cover	3	10	3	10	3	5	5	1	10	5
Muehlenbergia sp. Muehl. [illegible] sp.	50									
Koclaria pirotata Kochia [illegible]	50					60	45		70	40
% Litter sp. Hilaria ✓		100		100	100			100		
Sitanion hystrix Sitanion [illegible]			30							
Agropyron trachycaulum Ag [illegible]			70			40	50		30	60
Aplopappus spinulosis Hap. Spin.							5			

ecology consultants, Inc.

2.2.4-4

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis Baker Project: Date: 16 Oct 74
Site: [illegible] on site Length of Line:
T: 15 R: [illegible] Sec.: 32 ¼ Sec.: N [illegible] SE Transect Direction: 30°
General Description of Land:
Vegetation Type: Mixed Brush Condition of Foliage:
Aspect 110° Slope 25%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pinon				18 I_2		Service berry	740	1080	340	I_1 19
							510	575	65	
							2170	2350	180	[illegible] 25
							40	110	70	I_2 18
							430	460	30	
Juniper	790	1080	290	11 I_2			480	540	60	I_2 36
							1220	1370	150	
							1735	1760	25	
						~~[illegible]~~	2790	2915	125	[illegible]
									1045	
						[illegible]				
						Juniper				I_1 2 I_1 1 I_2 1
[illegible]					I_1 3 I_2 1	[illegible]				I_1 1 I_2 1
						[illegible]	1815	1860	45	I_1 12
							1380	1430	50	I_1 3
							2640	2720	80	I_2 7
									175	I_2 7
						Sage	2270	2395	125	I_1 3 I_1 3
						C nans.				I_1 3 I_1 1 I_2 2
						[illegible] berry				I_1 3 I_1 4 I_2 4 I_2 5

2.2.4-4

ECI

2.2.4-2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PRAIRM Date 16 / OCT 74 Size of quadrat

Field Analysts: [illegible] - [illegible] Sheet No. of

General description of land MIXED BRUSH

T. D. 30° A. 110° S. 25% 1S R99W S. 32 NWS

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	T	0	2	3	1	3	0	T	2	0
Oryzopsis hymenoides	100		100	100	100			100	20	
Ag. [illegible]				T						
Hap. Spin.						100				
Gutierrezia s.									20	
Wat Pen. penstemon caespitosus									60	

2.2.7-2

2.24-6

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

ield Analyst: [illegible] Project: 93 Date: 10/15/74
ite: [illegible] Length of Line: [illegible]
5 R: [illegible] Sec.: 17 ¼ Sec.: SWSE Transect Direction: N
eneral Description of Land: Ridge top
egetation Type: mixed [illegible] Condition of Foliage: [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

pecies	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
[illegible]	120	130	10.		5,15,21,14		1665	1685	20.	15,11,15,10,9
	370	420	50.		21,30,20		1701	1712	11.	13,10
	701	735	34.		6,4,		1895	1910	15.	
	1045	1120	75.				2205	2243	38.	
	1175	1270	72.				~~[illegible]~~	~~[illegible]~~		
	1300	1320	20.				2243	2276	33.	
	[illegible]	[illegible]	17.						120	
			278							
					42					4
[illegible]	212	294	82		3,5,8,2		1825	1845	20	10,19,9,25,12,
	330	345	15		10,12,14		1942	1953	11	27,15,15,19
	[illegible]	[illegible]	8		14,12		2122	2133	11	
	[illegible]	[illegible]	33				2145	2165	20	
	[illegible]	[illegible]	35				2360	2380	20	
	[illegible]	[illegible]	20				2480	2490	10	
			192				2675	2732	57	
									149	
rcocarpus										3,2,2
[illegible]	456	571	115		4,3,3,17		2101	2111	10	14,3,5,19,6,4,
	[illegible]	[illegible]	45		7,10,2,1		2133	2145	12	
	[illegible]	[illegible]	20				2480	2485	5	
	[illegible]	[illegible]	12				2390	2480	90	
			192				2519	2592	73	
[illegible]	173	190	17		5,2,3,4,1		2490	2500	10	3,3,2,2,1,2
	[illegible]	[illegible]	14		3,4,2				200	
	[illegible]	[illegible]	20							
	[illegible]	[illegible]	13							
			1.21							

50 ft from edge of Road

ECI

2.2.4-1

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Keller-Cavalesi Project: F3 Date: 10/15/74
Site: Permanent Length of Line: [illegible] m
T: [illegible]5 R: 99 W Sec.: 17 ¼ Sec.: SWSE Transect Direction: N
General Description of Land: Ridge top
Vegetation Type: Mixed Brush Condition of Foliage: Leaves [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	15t I_2-I_1	St Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Drter	124	146	22		13,11,8,19 13,15,15,10 9,		1560	1525	25	10,12,23,30,12,13 12,1
	172	185	13				1656	1671	15	
	249	277	28				1820	1850	30	
	396	492	96				1898	1992	94	
	525	545	20				2010	2032	22	
	955	1068	113				2060	2130	70	
	1150	1191	41				2230	2248	18	
	1210	1238	28				2290	2305	15	
	1255	1329	74				2332	2355	23	
	[illegible]	[illegible]	21				2395	2410	15	
	[illegible]	[illegible]	59				2430	2560	230	
							2710	2770	60	
			508		2.1				617	4,4
			278						786	
			786						120	
rmyph	201	211	10		2,3,6,7,6 12,2,17,25		1683	1750	67	17,12,16,9,19,11,1 25,1
	345	365	20				1660	1772	112	
	[illegible]	[illegible]	1				2160	2172	12	
	863	885	22				[illegible]	[illegible]	25	
	930	945	15						216	
			68							
nel	755	863	108		1,2,2,2,7, 34,16,5		2685	2710	25	24,12,3,3,9,4,14 7
	[illegible]	[illegible]	27							
			135							
rues					1,2,3					1,1

ECI

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 23 Site Permanent Mixed [illegible] Date 10/15/[illegible] Size of quadrat

Field Analysts: Kelley [illegible] Sheet No. 1 of 1

[illegible]l description of land T2S R99W Sec 17 ¼ Sec SWSE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
[illegible]	40	15	45	40	10	60	10	55	30	30
Festuca	[illegible]	75	70	60	50	50		50	50	20
[illegible]	25	10		30	25			05	20	
[illegible]	[illegible]		20							
Poa		10								
[illegible]		5								05
[illegible]		1				15				05
[illegible]			10							
[illegible] sm				10		05	15		05	
opp[illegible] [illegible]					25	05	25	05	20	
Eriogonum sp. [illegible]								10		70
unknown [illegible] [illegible]									05	

ECI

ecology consultants, inc.

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: FK and SU Project: 03 Date: 10/11/74
Site: mixed brush · permanent Length of Line: 60 m
T: 15 R: [illegible] Sec.: 33 ¼ Sec.: SW ¼ SE ¼ Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: mixed brush Condition of Foliage: after leaf fall
Aspect 165° Slope 11%

MATURE Class 3" plus diam. Reproductive class 3' high ≤ 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Artr	38 63 1040 2190 2930	44 80 1120 2211 3000	6 17 80 21 70 194	13, 3 6, 2, 6
						Symp	970 1320 1915	985 1337 1923	15 17 8 40	5, 7, 6 8, 3
						Amal	83 1500 2040 2440 2950	240 1635 2170 2950 2980	157 135 130 510 30 962	5, 18, 31, 21, 16, 5, 15, 7
						Quga Gambels Oak	410 460 1155 1761	430 990 1500 2080	20 530 345 319 1214	31, 23 5, 37
						Douglas fir Psme				0 2

Photo # 2 R2

ECI

2.2.4-10

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: 63 Date: [illegible]
Site: [illegible] permanent Length of Line: [illegible] 60
T: 15 R: 103W Sec.: 33 ¼ Sec.: SW-SE Transect Direction: [illegible]
General Description of Land:
Vegetation Type: Mixed Brush Condition of Foliage: [illegible]
[illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Amal	70	105	35	9, 25, 17
							275	285	10	12, 33, 19, 11, 17
							520	540	20	
							750	1110	360	
							[illegible]	1720	115	
							1845	2150	305	
							2180	2350	170	
							2375	2430	55	
							2480	2610	130	
							2770	3000	[illegible]	
									1430	
						Artr			962	3, 5
									2392	
						Opua	190	610	420	18, 15
									1214	
									1634	
						Ceno	1370	1395	25	3, 5, 6
							1570	1645	75	15, 3
							1750	1845	95	
									195	
						Symp				4, 3
							2890	2910	20	7, 8, 3
						PiE				2
							2725	2755	30	2

ECI

2.2.4-11

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project________ Site________ Date 10/11/79 Size of quadrat________

Field Analysts:________ Sheet No.________ of ________

General description of land Mixed brush

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	25	80	15	40	25	50	3	20	40	0
Carex sp.	80	100	95	40	30	85		80	100	-
Composite sp. (Agoseris?)	15			10						
Unid. dried forb [illegible]	5						100			
Penstemon sp.			5						T	
Galium boreale				5						
Erigeron sp.				5						
Eriogonum umbellatum				35	60					
Gilia sp.				5						
Lupinus sp.					10					
Thalictrum						10				
Achillea lan.						5				
Arctostaphylos								20		
Arctostaphylos										

Oth plts: Balsamorhiza sagittata Frasera sp. (miner's candle)
Linum lewisii Agropyron smithii
Cirsium sp. Mahonia repens

2.2.4-11

2:2.4-12

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: [illegible] Date: [illegible]
Site: Permanent Length of Line:
T: [illegible] R: [illegible] Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: [illegible] Condition of Foliage: [illegible]
ASPECT [illegible] [illegible] 6% PERMANENT

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft. number	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
[illegible]	~~20~~	[illegible]			5		[illegible]	[illegible]	40	[illegible]
	~~[illegible]~~	[illegible]					940	[illegible]	560	11, 8, [illegible]
	[illegible]	[illegible]	250		[illegible]		[illegible]	[illegible]	40	
							[illegible]	[illegible]	290	
									930	
									220	
									1150	
[illegible]	20	150	[illegible]		205		[illegible]	72[illegible]	180	
	[illegible]	[illegible]	130		1301 [illegible]		260	[illegible]	50	[illegible]
	380	[illegible]	30				[illegible]	[illegible]	30	[illegible], 3,
	530	[illegible]	110				[illegible]	[illegible]	70	
	730	[illegible]	320				[illegible]	[illegible]	50	
	1010	[illegible]	130				[illegible]	[illegible]	70	
	1520	1320	350				2820	[illegible]	50	
	[illegible]	[illegible]	300						500	
	[illegible]	[illegible]	10						1640	
			120						2140	
			140							
			1.640							
[illegible]	490	[illegible]	[illegible]		27,3		[illegible]	830	40	[illegible], 5
	1410	[illegible]	[illegible]		1619[illegible]		50	240	90	1
	830	[illegible]	50				[illegible]	[illegible]	105	14, [illegible], [illegible]
	[illegible]	[illegible]	80				[illegible]	[illegible]	80	
	[illegible]	2310	40				[illegible]	3100	120	
	[illegible]	[illegible]	60						435	
			40						555	
			15						990	
			75							
			235							
			555							
	[illegible]	1310	20		9.3 12.[illegible]5		310	340	30	3 4

2.2.4-12

2.2.4-72

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 53 Site ______ Date 10/11/74 Size of quadrat ______

Field Analysts: SLE - EK Sheet No. ______ of ______

General description of land Mixed brush — T2S, 100W, S16, NE¼ SE¼
S. side (included) hills

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	[illegible]	10	15	70	[illegible]	[illegible]	[illegible]	35	40	10
[illegible]		120	160			100				
[illegible]					150	[illegible]	[illegible]	~~[illegible]~~	70	[illegible]
B. [illegible]				+		30			30	[illegible]
F. [illegible]								[illegible]		
[illegible]								5		
G. [illegible]								5		

2.2.4-73

A. 2.2.4 14

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: S/E - [illegible] Project: F3 Date: 10/16/74
Site: [illegible] on site Length of Line:
T: 25 R: 95W Sec.: 8 ¼ Sec.: NE of NW Transect Direction: 270
General Description of Land:
Vegetation Type: Mixed [illegible] Condition of Foliage:
[illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
	2460	2500	40			[illegible]	780	825	45	I 56
	2650	2720	70				1210	1270	60	I 49
	2455	2510	55				1610	1690	60	I [illegible]
	2990	3000	10				2260	2340	80	I 76
			910				2480	2530	70	
							[illegible]	[illegible]	60	
							2720	2770	50	
							505	560	55	
							750	770	80	
							1275	1290	15	
							1880	1940	80	
							1960	2050	90	
							2165	2210	50	
						[illegible]	[illegible]	150	50	[illegible]
							[illegible]	[illegible]	65	I 26
							[illegible]	[illegible]	140	I 10
							[illegible]	[illegible]	120	II 46
							530	545	15	
							1620	1660	40	
							1750	1765	15	
							2000	2010	10	
									455	
	[illegible]	[illegible]	15			[illegible]	[illegible]	120	55	9
			120				[illegible]	[illegible]	30	II 10
							555	575	20	I [illegible]
										I 19
	1440	1460	20			[illegible]	[illegible]	2405	50	I 14
	1600	1810	210			2270 2290	[illegible]	[illegible]	20	I [illegible]
	1570	1590	20				[illegible]	[illegible]	10	III 16
	[illegible]	[illegible]	15				1240	1255	20	18
	[illegible]	2950	10				1360	1375	15	I 17
			445				1780	1780	15	I 12
						Bi[illegible]	[illegible]	[illegible]	30	I 0
							1230	1215	90	
							[illegible]75	1920	45	
									45	
									180	
						Juniper				I 1
										I 2
										II 1
						Pinon				II 1
										I 3
										I 1
						[illegible] Tetra				II 1
										I 1

ECI

2.2.4-15

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 23 Site [illegible] Date 10/16/74 Size of quadrat

Field Analysts: SLB [illegible] Sheet No. of

General description of land Mixed [illegible]

T.D. 270° A. 340° S 20% T2S. R99W. S9 NE NW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	5	10	10	3	10	5	15	10	3	-
Festuca thurberi	[illegible]	[illegible]	20				30	45		[illegible]
K. cristata	[illegible]	30			65	40				
[illegible]		10	30	100		20	5		5	
Stipa columbiana			20		10	20		30		
Eriogonum [illegible]			20							
[illegible] sp.			10							
A. [illegible] ([illegible])					10					
[illegible]					5	[illegible]	40			
Senecio sp.					10					
Phlox							30			
Hap. [illegible]							5	5		
[illegible] sp.								[illegible]		
[illegible] sp.									[illegible]	

[illegible], loose dry soil

ECI

ecology consultants, Inc.

K

2.2.4-16

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley - Ellis Project: 83 Date: 10/10/78
Site: Random Length of Line: 50m
T: 15 R: 100W Sec.: 9 ¼ Sec.: NENE Transect Direction: 183°
Rural Description of Land:
Vegetation Type: Mixed Brush Condition of Foliage: Leaves [illegible]
Aspect 245° slope 2%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	~~Basal Area~~ Sq. ~~Ft.~~ No.	Species	I_1	I_2	$I_{2}-I_1$	Number Per ~~50'~~ 15M Units
Artr	0 130 1260 1708 2200 2285 2365 2550 2650	25 170 1310 1721 2210 2310 2440 2610 2790	25 40 50 13 10 25 75 60 140 438		13, 11, 15, 8, 18 30, 12, 21, 17, 6		100 470 690 1210 1470 1500 1620 1690 1825 2140 2470 2915 2985	117 488 715 1270 1500 1505 1670 1710 1860 2195 2510 2920 3000	17 18 25 60 30 5 50 20 35 55 40 5 15 375 438 812	6, 8, 7, 8 4, 4, 6, 10, 10, 7, 14
Amal	620 770 1780 2140 2990	670 750 2075 2195 3000	50 30 295 55 10 440		5, 15, 3 40, 9, 8, 1		119 502 705 1140 1540 2510	235 575 910 1365 1565 2525	116 73 105 205 25 15 559 440 999	30, 5, 8, 10 8, 5, 10, 10, 5 1, 9, 4, 6, 9, 1
Symp	0 2925	0 2950	25		3, 3, 6, 10 15, 12, 8, 8, 2		235 1365 2525 2920	255 1390 2535 2935	20 25 10 15 70	4, 8, 5 4, 2, 5, 7
uga gambels oak					0 3, 1, 2, 2					0 3, 6

2.2.4-17

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project E3 Site Random mixed [illegible] Date 10/10/74 Size of quadrat ____

Field Analysts: Kelley - Ellis Sheet No. 1 of 1

General description of land T1S R100W Sec 9 ¼sec NENE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	70	30	20	70	25	25	60	20	60	25
Geranium	10	5	T	5	10					
Carex	80	60	50	80	40	35	75	40	75	45
Eriogonum umbel	5	T		10						5
Poa sp	5	20	10		30		5		10	
Oxytropis lamberti		10								
Gilia		5								
Solidago sp		T								
Erigeron small sp		T				10	20		15	10
compositae			40			5		5		
single awn brome Bromus			T					15		
Frasera				5						
[illegible]illea lan					10		T			
Umbelliferae sp					10					
stco						45		40		40
Gabo							T			
Agsm								T		

ecology consultants, inc.

2.2.4-18

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: Q3 Date: 10/11/74
Site: Random Length of Line: [illegible]
T: [illegible]S R: 100W Sec.: 34 ¼ Sec.: SW¼ NE¼ Transect Direction: [illegible]
General Description of Land:
Vegetation Type: [illegible] Condition of Foliage: [illegible]
Aspect 175° [illegible]

MATURE Class ~~3" plus diam.~~ Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area ~~Sq. Ft.~~	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Anal	70 [illegible] 1500 2930	110 [illegible] [illegible] 3000	40 270 280 70 660		53, 5 11, 8, 17, 6		0 1135 [illegible]	60 1170 1890	60 35 300 395 660 1055	15, 3, 16 18, 3, 3, [illegible]
Symp	130 [illegible] 2395 2460	180 [illegible] 2440 2475	50 70 45 15 180		8, 21 13, 4, 3, 8		80 458 1490 [illegible] [illegible] 2720	105 461 1510 [illegible] 2370 [illegible]	25 3 10 110 95 10 253 140 423	6, 10, 9, 3 9, 25, [illegible]
Artr	210 [illegible] [illegible] 710 1295 1428 [illegible] [illegible] 2175 2310 2170	230 [illegible] 610 780 1330 1445 [illegible] [illegible] [illegible] 2390 [illegible]	20 75 50 70 35 17 55 50 30 80 70 552		18, 8, 14 10, 19, 23		190 [illegible] 845 1040 [illegible] 2080 [illegible] [illegible] [illegible]	215 720 [illegible] [illegible] 1230 [illegible] [illegible] [illegible] [illegible]	25 70 30 10 30 90 50 55 15 445 552 997	18, 23, 6, 9 5, 31, [illegible]

ECI

2.2.4-19

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site ______ Date 10/11/74 Size of quadrat ______

Field Analysts: SLE + EK Sheet No. ______ of ______

General description of land mixed brush, Random; T1S, R100W; S34 SW¼ NE¼

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
TOTAL COVER	10	25	40	25	30	20	15	15	20	25
[illegible]	85		15				5		35	35
[illegible] sp.	5	5	10			10			10	
[illegible] Sp.	5	5								
Agropyron smithii	5	10		T		50	60		15	15
Eriogonum umbellatum		20	10			40			20	15
Carex sp. [illegible]		100	65	100	100		10	100		
Poa sp.				T			5		20	
Bromus marginatus							5			
Lupinus sp.							5			25
Solidago sp.							5			
Senecio sp.							5			
[illegible] sp.										20

ECI

ecology consultants, inc.

4A · [illegible]

2.2.4 - 20

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kolla · Cavealosi Project: 53 Date: 10/14/74
Site: [illegible] Length of Line: 50m [illegible]
T: [illegible] R: [illegible] Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: [illegible]
General Description of Land: [illegible] hillcrest hills
Vegetation Type: Mixed [illegible] Condition of Foliage:
Aspect SE slope 10%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

			1ST 15 M						2ND 15 M	
Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
AMEL	762	797	35		10,10,7,5 8,12,5		2202	2321	319	4,29,3,4,7,
	855	891	36				2330	2379	49	
	902	924	22				2388	2550	162	
	933	962	29				2621	2632	11	
	981	1006	25						541	
	1061	1072	11						221	
	1210	1221	11						733	
	1247	1256	9						1495	
	1372	1383	11							
	1332	1353	21							
1474-1486	1361	1382	5							
	1391	[illegible]	6							
	~~1375~~	~~[illegible]~~	221							
ym	505	512	7		15,3,2,4,2		2481	2503	22 7	8,6
rter	660	669	9		1,3,13,4,4		1559	1571	12	3,6,7,4,10,5
	660	670	10				1582	1593	11	
	725	750	25						23	
	1137	1181	44							
	1269	1291	22							
	1299	1311	12							
	1357	1361	4							
	1385	1390	5							
	1401	1411	10							
			141		3					2
hr										

4B. 2.2.4-21

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kellen-Cascalosi Project: 83 Date: 10/14/74
Site: Random Length of Line: [illegible]
T: 2S R: 100W Sec.: 21 ¼ Sec.: SENE Transect Direction: NW
al Description of Land: Top of Cathedral Bluffs
Vegetation Type: mixed brush Condition of Foliage: leaves fallen

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	1ST 15 I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	2ND 15 I_2	I_2-I_1	Number Per 50' Units
AMEL	680	1072	393		2,2,6,1 18,24,12					8,14,13,15,7
	1472	[illegible]	6							
	1658	1731	73							
	1734	1745	11							
	1827	1886	59							
	[illegible]	[illegible]	84							
	[illegible]	2502	58							
	2945	2995	50							
			733							
m	165	182	17		10,5,16,4 4,3,7,10					5,4,6,14,3,4 12,14
	624	635	11							
	701	727	26							
	780	825	45							
	1128	1150	22							
	1429	1453	24							
	1643	1652	9							
	2045	[illegible]	7							
7. →	[illegible]	2285	10 20	91						
	2311	[illegible]								
er	496	[illegible]	18	127 220	3,3,3,16					5,6,12,5,4 6
	211	296	85							
	359	382	23							
	471	508	37							
	1318	[illegible]	23							
	[illegible]	[illegible]	15							
→	[illegible]	[illegible]	87							
→	[illegible]	[illegible]	93							
4			~~[illegible]~~ 320 141 23							

454

40

ECI

2.24-22

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 43 Site 4 Date 10/14/74 Size of quadrat

Field Analysts: Sheet No. of

General description of land 4

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	30	70	1	35	05	10	10	90	05	80
unidentified [illegible]	50									
mustard [illegible] rosette	10				05	05			10	
agropyron	10		95		70					
aster [illegible]	10									
[illegible]	20		65			80	40		20	
[illegible]		t								
carex		100		100				65		75
draba					t					
lupinus					05					
erigeron					20	t	10		10	
poa						10	40			
[illegible] composite						05				
composite							10			
arctostaphylos								35		25
festuca (ovina?)									60	

ecology consultants, inc.

k

2.2.4-2

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Bills Bdor Project: ______ Date: 10/16/74
Site: [illegible] brush [illegible] on site Length of Line: ______
T: 1[illegible] R: [illegible] Sec.: 32 ¼ Sec.: NW SE Transect Direction: 320°
General Description of Land: ______
Vegetation Type: Mixed Brush Condition of Foliage: ______
Aspect 100° Slope 15%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
						Serviceberry ✓	1270	1345	75	I_1 17
							1385	1700	315	II_1 34
							1430	1760	330	I_2 14
							1950	2170	220	II_2 32
									940	
						Mahogany				II_2 1
						Snowberry	1530	1580	50	I_1 8 II_1 3 I_2 6
						C. vel				I_1 4 II_1 6 II_2 9
						C[illegible]	2920	2940	20	I_1 2 I_1 1
						Pinon				I_1 1 I_1 1 II_2 1
						Sage	850	950	100	I_1 15
							1010	1150	140	II_1 16
							1180	1250	70	I_2 6
							2230	2250	20	
							2980	3000	20	
						Juniper			350	I_1 1
						Bitterbrush	2560	2610	50	I_2 4 II_2 6

ECI

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project C?3 Site RANDOM Date 16 Oct 74 Size of quadrat

Field Analysts: Ellis - Baker Sheet No. 1 of 1

te l description of land mixed brush

T. D. 320° A 100° S 15%

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total Green	0	5	0	3	0	0	1	0	T	1
Poa [illegible]		100		100			1/00		T	100
Stipa spp										
[illegible] sp.									T	

ECI

ecology consultants, inc.

6A 12.2.4-25

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: ______ Date: 10/14/7[illegible]
Site: RANdom [illegible] Length of Line: 15[illegible]
T.: 2 R: [illegible] Sec.: 2[illegible] ¼ Sec.: [illegible] Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: ______ Condition of Foliage: ______
Aspect NW Slope 10%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	1ST 15 I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	2N 15 I_1	I_2	I_2-I_1	Number Per 50' Units
[illegible]	0 53 91 1[illegible]9 [illegible] [illegible] [illegible]	[illegible] 84 [illegible] 145 [illegible] [illegible] [illegible]	40 31 11 36 26 3 65		1,7,12, 5,3,6,7 4,		1584 2042 [illegible] [illegible] [illegible] [illegible] [illegible]	1592 2061 [illegible] [illegible] [illegible] [illegible] [illegible]	8 19 11 26 35 14 45	7,8,25,13,11,1[illegible] 12,7
[illegible]	3[illegible]5 3[illegible]1 [illegible] [illegible]	[illegible]	15 21 12 32 11 87		2,5,2,1 15,5,2,5		1748 [illegible] [illegible]	[illegible]781 [illegible] [illegible]	33 49 30 112 87	1,3,2,7,5,5
[illegible]	[illegible] [illegible]	[illegible] [illegible]	160		[illegible],3,3,2 2,6,11		[illegible]	[illegible]	8	14,[illegible],3,5
[illegible]					1,3					2
[illegible]	[illegible] 164 [illegible]	5[illegible] [illegible]	31 [illegible] [illegible] 10 [illegible] [illegible] 15 39 [illegible] 659		[illegible],[illegible],6,2[illegible] 8,71,3,1[illegible] 6		1925 [illegible] 2220 [illegible] [illegible]	1932 [illegible]55 [illegible] 2301 [illegible]	7 11 25 19 4 12 76	3,6,6,7,4,6,3 4
	14[illegible] [illegible]	[illegible]	7 32 27		3,3,4,3,[illegible] 3		[illegible] [illegible]	251[illegible] [illegible]	7 12 19	1,4,5,5

ECI

B

2.2.4-26

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

ield Analyst: Kelley-Castrolosi Project: 27 Date: 10/14/74
Length of Line: 2nd [illegible]
i: RAndom
: 5 R: 100W Sec.: 25 ¼ Sec.: NW NW Transect Direction: NE
eneral Description of Land: ridgetop
egetation Type: Mixed Brush Condition of Foliage: leaves colored

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

pecies	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
lem	109 354 594 855 1252 1440	119 414 643 880 1281 1459	10 60 49 25 49 19 212		21,18,12 6,8,15,10		1530 1591 1719 1783 1809 1895 2120 2230 2324 2368 [illegible] [illegible] 2979	1539 1602 1741 1795 1885 1910 2150 2251 2347 2391 2771 [illegible] 3010	9 11 22 12 76 15 30 21 43 23 8 8 21 299	4,15,15,7,5 5,17,5,17
mat	20 60 812 1251	25 67 840 1302	5 7 28 21 61	659 74 61 49	5,3,8,8,4 7,3		2455 2538 2902	[illegible] 2559 2911	8 21 19 48	4,6,8,4,5,2,6 4,15,6
mel	0 290 840 1302	20 329 855 1421	20 39 15 119 193	193 112 205 87 597	1,4,8,3,10 5		1915	2120	205	5,3,2,2,3 3,2 3,14,1
ngs	495 1421	513 1430	18 9 27 27 19 21		4,2,3,6 2		2190	2211	21	4,4,5,1,3
tter										
[illegible]										

ECI

2.2.4-27

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site 6 Date 10/14/74 Size of quadrat

Analysts: Kelley – Cavcalosi Sheet No. 1 of 1

General description of land T2S R100W Sec 25 ¼ sec NW NW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
[illegible]	05	50	30	40	25	40	25	35	50	20
Poa	100	20	20	10	40	10			10	05
[illegible]		50		15			40	25	30	05
[illegible]		20	60	10		05	10	10	10	
[illegible]		10	10			15	10	40	10	50
[illegible]		t								
[illegible]			20	50		60	40		15	40
[illegible]			t	05			t			t
[illegible]				05					10	
[illegible]				05						
[illegible]					10	10			10	
[illegible]								10		t
[illegible]								15	05	

2.2.4-28

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

ield Analyst: [illegible] Project: 77 Date: 10/14/74
Length of Line: 230 [illegible]
S [illegible]
T: 2 R: [illegible] Sec.: 15 ¼ Sec.: NW NW Transect Direction: SW
eneral Description of Land: [illegible]
egetation Type: Mixed Brush Condition of Foliage: [illegible]
Aspect ESE slope 15%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

	2ND		15	meters		1st	15	M		
Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
ymph					3, 14, 3, 6, 7, 3, 20	Symph	195 349 435 472 559 581 668 768 926 1028	321 353 443 444 567 593 691 803 948 1063	126 14 8 22 8 12 23 35 22 65 335	2, 10, 9, 3, 4, 11, 23, 9, 4, 6, 35, 4 2, 10, 9, 3, 4, 11
[illegible]					2, 4, 2 2, 2	Chr	99 702	114 921	15 19 34	5, 4, 7, 2, 2, 5 3, 3, 3, 9, 3
arter					17, 6, 13 6, 10, 26 15, 16, 5	Arter	60 146 374 594 938 1164 1326 1343	77 164 388 657 984 1181 1358 1392	17 18 14 59 46 17 32 9 212	10, 15, 16, 5, 11, 1 14, 6, 12, 10, 7
						1412 1416				
mal					5, 4, 9 14, 4, 7	Amal	532 703 810 853 1098	538 769 819 874 1127	6 66 9 21 29 131	6, 12, 7, 4, 6, 2, 15, 5

ECI

2.2.4-29

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

ield Analyst: [illegible] Project: [illegible] Date: [illegible]
ite: [illegible] Length of Line: [illegible]
: [illegible] R: [illegible] Sec.: 15 ¼ Sec.: [illegible] Transect Direction: [illegible]
e[illegible] Description of Land: [illegible]
egetation Type: [illegible] Condition of Foliage: [illegible]

MATURE Class 3" plus diam.

Reproductive class 3' high < 3" diam.

	1st		15 met				2nd	15	meter	
pecies	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
ymph	427	[illegible]	20	2,9,3,5						1,4,9,4,3
	678	687	9	2,5,10						
			12							
	1071	1083	91							
	1101	1192	25							
	1312	1337	89							
	1647	1736	17							
	1768	1785	2							
	1809	1871	26							
	1915	[illegible]	24							
	1984	2008	315							2,4,3,7,3
			335	5,3,3,3						
ary			650	2,2,2						
ter	0	29	29	20,12,10						4,7,6,6,12,9
	362	368	6	7,5,5,7						
	570	652	82	13,						
1 2232	710	801	91							
2260 - 2278	826	879	53							
	901	[illegible]	18 31							
	1020	1022	2 22	212 563 5/775						
91 - 1932	1346	1411	65 11							
011 - 2041	1432	1450	18 30							
2095 - 2102	1488	1511	23 12							
2127 - 2150	1738	1762	24 46							
			563							
mal	120	169	49	2,1,3,6						5,2,6,47,30, 6
	191	362	171	3,12,6,						
	368	[illegible]	30	3						
	2257	[illegible]	26							
	2375	[illegible]	25							
			301							
			131							
			1132							

2.2.4-30

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project [illegible] Site [illegible] Date [illegible] Size of quadrat

Field Analysts: [illegible] Sheet No. 1 of 1

General description of land T 2S R 100W S 15 [illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	05	35	20	15	40	05	15	30	0	0
[illegible]	40	20	40	25	40	100	25	40		
[illegible]	60	10	05				25	10		
[illegible]		30	10					t		
[illegible]		20	40	70	20		20	40		
[illegible]			05	05	10					
[illegible]					t					
[illegible]					20		10			
[illegible]							10	10		
[illegible]							10	t		
[illegible]								t		

2.2.4-3

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelly - Canedo Project: 83 Date: 10-14-76
Site: [illegible] Length of Line: 155 31 m
T: [illegible] R: [illegible] Sec.: 7 ¼ Sec.: SENE Transect Direction:
General Description of Land:
Vegetation Type: Mixed shrub Condition of Foliage: [illegible]
Aspect north Slope 4%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Pinyon.				2 1
						Symm.	682	733	21	5,3,2,2,3,[illegible]
							730	739	9	5,2,7,4,4,3,1
							1305	1330	25.	~~12~~ 2,4,2
							2793	2804	11	2,4
									66	
						Amel	2894	2921	77.	5,5,2,5,7,4
							0	43	43.	
							61	72	11.	
							245	248	3.	
							299	435	136.	
									11.	
						66 66 132	453	501	48.	
							2132	2180		
							2220	2408	188.	
							2485	2506	21.	
							2559	2593	34.	
									572	
						Chry.	1319	1332	13	3,2,1,4,3,3,
							1444	1453	9	4,4,10,1,2
							1908	1922	14	9,5
									36	
						Arter	150	181	31	15,12,12,10,14,10,8
							[illegible]	[illegible]	91.	7,21,12,19,12,16,14,17
									12	
							754	[illegible]	23.	
							856	779	35	
							1149	1184		
							1219	1253	34.	
							1433	[illegible]	37.	
							1516	1554	38.	
							1635	1658	23.	
							2415	2435	13	
						Persia	2532	2540	20	1,1,1
									8.	
							[illegible]	2601	34	
							[illegible]	[illegible]	11	
							[illegible]	[illegible]	[illegible]	

434
444
878

ECI

[illegible] 2.2.4-32

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

ield Analyst: [illegible] Project: [illegible] Date: [illegible]
[illegible] Length of Line: [illegible]
: [illegible] R: [illegible] Sec.: 7 ¼ Sec.: [illegible] Transect Direction:
eneral Description of Land: [illegible]
egetation Type: [illegible] Condition of Foliage: [illegible]
[illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
						Pinyon				1
						Symp	[illegible]	[illegible]	17	3, [illegible] 3
							[illegible]	[illegible]	31	1,3,1
							[illegible]	[illegible]	3	4,5,5,2
						Chry	[illegible]	[illegible]	15	
									66	2,3,3,4,2,1
						68	1315	1360	50	
						36	1835	1833	15	
						104			65	
						Amal	[illegible]	[illegible]	205	8,3,5,1
							[illegible]	[illegible]	25	15,9,1,2,5,4
							2354	[illegible]	52	
							[illegible]	[illegible]	65	
							[illegible]	[illegible]	67	
							[illegible]	300	71	
									515	
									572	
									1087	
						Artem	392	481	89	[illegible],103,11
							550	596	46	21,12,14,12,[illegible]
							[illegible]	[illegible]	7	3
									45	
							1590	1635	107	
							1655	[illegible]	19	
							1405	[illegible]	54	
							730	706	13	
							[illegible]	[illegible]	7	
							[illegible]	[illegible]	47	
							[illegible]	[illegible]	10	
							[illegible]	[illegible]	444	
						Junipc.				1

ECI

2.2.4-32

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project E3 Site Random [illegible] Date [illegible] Size of quadrat

Analysts: [illegible] Sheet No. 1 of 1

General description of land T2S R99W Sec 7 ¼Sec SENE

Species	1	2	3	4	5	6	7	8	9	0
Total [illegible]	30	25	10	35	30	20	25	25	35	10
arizonicum	5	10	10		10			30	05	
[illegible]	60	10	05	20	80	95	30	40	90	30
[illegible]	15		15			05		10	t	
[illegible]	20	10	70	20						05
B[illegible]		60								
chrys. [illegible]		10		20			10			30
mat penstemon				20			20	20		05
[illegible]							30			
arizonicum 2				20	10					
[illegible]							10			
[illegible]									05	
[illegible]										20

Pinyon-Juniper (2.2.5)

2.2.5-1

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis Baker Project: 83 Date: 10/16/74
Site: Permanent [illegible] Site Length of Line:
T.: [illegible] R: 99W Sec.: 4 ¼ Sec.: NE ~~4~~ NE Transect Direction: 350
General Description of Land: Permanent [illegible] A 115° S 48%
Vegetation Type: Pinyon-juniper Condition of Foliage:
Aspect 115° Slope 48%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Juniper	2190	2210	20	II_1 35		Serviceberry	655	720	65	I_1 53
							975	990	15	II_1 10
							1260	1300	40	
							1320	1570	260	
							1500	1540	40	
							1830	1860	30	
							2480	2490	10	
							230	250	20	I_2 8
							280	490	210	
									690	
Pinon				II_2 12						
						Juniper				I_2 2
						mountain mahog.	390	470	100	I_1 5
									90	II_1 0
							2100	2190	190	
										II_2 1
						Pinyon	2080	2120	40	I_1 1
							50	100	40	II_1 3
									80	I_2 3
										II_2 5
						Shadscale	2480	2530	50	II_1 16
							790	940	150	I_2 13
							1440	1490	50	II_2 2
							1510	1525	15	31
							1790	1810	20	
									285	
						Sage	2620	2700	80	I_1 2
							40	150	20 110	II_1 6
							1280	1350	70	I_2 9
							1700	1750	50	
									270	II_2 9
						Rabbitbrush	1170	1185	15	I_1 5
						nauseosus	2275	2330	55	II_1 10
									70	I_2 9
										II_2 9
						viscidiflorus				II_1 1
						Juniper				II_1 .1
						Bitterbrush	1660	2010	350	I_2 1 II_2 2

322 ECI

2.2.5-2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PERM Date 10/16/74 Size of quadrat

Field Analysts: BAKER - Ellis Sheet No. of

al description of land P. J. T. 25 R. 99 S. 4 NE SW

T. O. 35° A. 115° S. 48%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
+ cover	3	3	0	0	0	0	3	1	0	1
Oryzopsis hymenoides	80	40					100	100		100
Hap spin.	20									
MA re		60								

Shale slope, hard packed, [illegible]

2.2.5-3

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Ellis-Baker
Field Analyst: Ellis-Baker Project: 83 Date: 10/16/74
Site: Ulrm. F. Permanent on site Length of Line: 50 m
2 S R: 99W Sec.: 4 ¼ Sec.: NW NE Transect Direction: 212
General Description of Land:
Vegetation Type: Pinyon - Juniper Condition of Foliage:
A: 320 Slope 15%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.
Juniper	1410	2080	170	I_1 15	
	2350	2610	260	66	
			430	25	
				15	
				II_1 40	
				26	
				20	
				15	
				45	
				II_2 15	
				12	
Pinon	1100	1170	70	I 35	
	2370	2740	370	45	
	1600	1620	20	II_1 45	
	1670	1890	220	20	
	2070	2160	90	I_2 20	
	2680	2820	140	25	
	2940	3000	60	II_2 15	
			970	20	
				14	
				16	
				17	
				18	
				14	
				17	

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Juniper				I_1 1
				I_2 1
				II_2 3
Bitterbrush				I_1 7
Sage	2450	2520	70	I_1 3
	450	490	40	II_1 12
	760	820	60	I_2 21
	1120	1150	30	II_2 21 / 57
	1215	1245	30	1
	1540	1555	15	
			245	
Pinon			15	I_1 2
				I_2 3
				II_2 3
Snowberry	1260	1265	I_2-II_2 5	II_1 9
	1520	1530	10	I_2 9
	1375	1430	55	II_2 17
			70	
Rabbitbrush	2745	27		II_2 3
	2820	2840	20	
	2860	2875	15	
	2890	2895	5	
Serviceberry			40	II_2 6

14
17
36

ECI

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site RANDOM Date 16 oct. Size of quadrat

Field Analysts: BAKER-ELLIS Sheet No. 1 of

General description of land P.J. 25. R 99W/S4 NWNE

T.D. 272° A.320° S.15%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	2	4	5	1	3	5	1	2	2	5
Poa sp.	100	50	90		100	70			50	20
Ar. tridn		40		100				40	40	30
Phlox			10					50		
Eriogonum microthecum						20				
Cryptantha sp.						5			10	30
Sitanion hystrix						5				
Astragalus sp. (greybeans)							30			
Dalea sp.							70			
Oenothera sp. ([illegible])								10		
Penstemon sp										
Erigeron sp										20

Balsamorhiza
O. polyacantha

Low soil - sandstone,
rocky

peppermint
eating
Shadscale seeds.

2.2.5-5

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Ellenwood Project: 43 Date: 10-15-74
Site: C-a on site Length of Line: 60 meters
T: 15 R: 99W Sec.: 33 ¼ Sec.: SW¼NW¼ Transect Direction:
General Description of Land: [illegible] Slope - South Facing - Sparse growth.
Vegetation Type: PJ Condition of Foliage: dormant -

MATURE Class 3" plus diam. | Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units I-0 II-0 area I-0
Juniper	0	590	90			[illegible] Nas				Chry, Nas. - I-6 II-2 17 15/2
	2450	2470	20							I-9 II-15
			110							
						Atriplex	2220	2260	40	Chry. Visid. I- II-0 I-2 II-
										[illegible] - I-8 II-7
						Amel.	[illegible]	2340	30	I-6 II-16
							65	120	65	
							780	800	20	Atriplex Afertilis I-0 II-0
							820	850	30	
							1610	1640	30	I-0 II-8
							1910	1940	30	
							2290	2305	15	Cercocarpus
									220	
						Cercocarpus	[illegible]	374	150	I-1 II-3
							145	220	75	
									225	II-2 II-2
						Piñon	120	140	20	Piñon - I-0 II-6
						Sump	1830	1855	25	I-6 II-7
							2125	2130	5	
							2350	2420	70	Symphoricarpos I-0 II-1
							2440	2480	40	
							2650	2720	70	
									210	I-4 II-10

Juniper II-2
I-1

found nest of some mammal under large Juniper tree - collect some seeds.

ECI

2.2.5-6

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PERM Date 15 OCT. 74 Size of quadrat

Field Analysts: ELLIS - ELLINWOOD Sheet No. of

General description of land PINYON-JUNIPER T. R. S. 33

T. D. 160° A. 130° S. 35%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOTAL COVER	10	1	1	2	0	5	3	10	2	0
Eriogonum sp. ([illegible])	95	100	50	60		60				
Ag. trachycaulum	5					40				
Haplo. spin.			50	40			100			
Oryzopsis hymenoides								100		
Sitanion hystrix									100	

Lygodesmia sp. Leaves short spine tipped

Thin soil - 2" - broken shale - small

Chipmunk gathering A. confertifolia seeds

Elymus cinereus

ECI ecology consultants, Inc.

2.2.5-7

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kellen Sinz Project: 83 Date: 10-16-74
Site: community on site Length of Line: 300'
T: 5 R: [illegible] Sec.: 3 ¼ Sec.: SE NE Transect Direction: SSW
General Description of Land:
Vegetation Type: P.J. Condition of Foliage:
Aspect NW Slope 15% along eastern boundary South [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2-}I_1$	Number Per 50' Units
						Pied				4 1,2 1 30m
							0 2589	2615	26	1 13 ~~8~~ 60m
uni	0 2120 2590	0 2370 2915	250 325	30 35 55 55	2(	Juni				1 1 30m
30										
	880	910	30	50						
60 m	2820	3000	180 785			Artr				12 3,3 30m
										2 0 60m
						Amal				1 0

2.2.5-11

ECI

2.2.5-

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site [illegible] p.j. Date 10-16-74 Size of quadrat ______

Field Analysts: Kelley Sarne Sheet No. ______ of ______

[illegible]al description of land p.j. [illegible]

[illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOT. COV.	5	20	15	10	5	15	1	5	T	1
Ha sp	95	10	70	40	60	35	80	35		20
Spiura mat	5	50	15	35	15	30				
Opuntia		10								
Festuca		20								
Guti		5	5							
Artr		5	5			35		65	100	
Cryptantha			5			T				
Aster (shrubby)			T							
Arenaria			+	10	5		T			
Draba			T	T	T		T			
[illegible] like				10		T				
[illegible]rrow				T	20		30			80
[illegible] mustard				T						
Seedling				5	T	T				

2.2.5-9

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Sanz Project: S3 Date: 10-[illegible]-74
Site: Pon. P.J. on site Length of Line: [illegible]
T [illegible] R: [illegible] Sec.: 9 ¼ Sec.: [illegible] NE Transect Direction: NE
General Description of Land:
Vegetation Type: Pinyon-Juniper Condition of Foliage:
Aspect NW Slope 22%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Pi ed	0	420	420	52 cm		Ar. tr.	1830	1850	20	1 7
	1180	1455	275	27			0	0		0 5
	2591	2750	159	13			0	0		
	0	0	854	14						3 3
	0	0		12						2 0
				22						
Ju. os	620	840	220	45 cm						
	1620	1930	310	100						
	0	130	130	15						
	220	310	90	40						
	1160	1500	340	30						
	1500	1820	320	12						
	2390	2591	201	38						
			1611	25						
				75						
				23		Pi ed	0	0		1/2
				19			0	0		
				50			0	0		0/4
				67			0	0		
				12						
				14						
				15						
				42						

2.2.5-1-9

ECI

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Perm. P.J. Date 10-16-74 Size of quadrat

Field Analysts: Kelley, Sanz Sheet No. 1 of

General description of land Piñon - juniper

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOT. COV.	5%	1%	1%	0%	2%	3%	3%	0%	1%	1%
[illegible]	100		70		100	10	20		90	100
Ag. trac.		100				40				
descurania			30							
pinion						10				
[illegible] mat							70			
Arenaria							10		10	

10% of old horse sign *

2.2.5-11

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Ellmund Project: 8.3 Date: 10-14-74
Site: Permanent Length of Line:
T: [illegible] R: [illegible] Sec.: 13 ¼ Sec.: SW SW Transect Direction: [illegible]
General Description of Land: Desert 2280 [illegible]
Vegetation Type: Pinyon - Juniper Condition of Foliage: Dormant - Seeding

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Piñon	1150	1570	420			Aster	170	190	20	Aster I-99
I-37	1770	2080	310				330	360	30	II-9
II-33, 27							520	535	15	I-17
							735	750	15	II-9
I-65,	1410	1690	280				910	935	25	134
II-0			1010				560	580	20	
							1420	1425	5	
							2050	2105	55	Chry. Visid. I-25
							2650	2690	40	II-0
									225	
										I-0
										II-0
Juniper	0	360	360							
I-42, 30	3560	3650	90			Chry. Visid	360	400	40	
II-25			450							
35										
I-90, 35										
I-30,										
45,										

ECI

2.2.5 -12

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site ____ Date 10/14/74 Size of quadrat ____

Field Analysts: Ellis - Ellmwood Sheet No. ____ of ____

G l description of land P. J. permanent. T 1S R 99W S. 13

T. P. 215 A. 320° 3%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
T. C.	3	5	5	5	4	0	10	10	15	10
Agropyron trachycaulum	100	20	30		30		70	70	80	10
Koeleria cristata		80	70	80	60		75		10	
Arenaria sp.				20	10		15			
Poa sp. Sandbergiana								30	10	8
~~Muhlenbergia sp.~~ Poa secunda (juncea)										80
Festuca octoflora??										10

Large mature juniper and pinyon

ECI

ecology consultants, Inc.

2.2.5-13

Permanent PJ

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Elhwood Project: 83 Date: 10-15-74
Site: South Fork of [illegible] Creek Length of Line: 50 meters
T: 15 R: 99W Sec.: 12 ¼ Sec.: SW¼ NE¼ Transect Direction: 355°
General Description of Land: aspect 355 Slope 7%
Vegetation Type: Pinion - Juniper Condition of Foliage: —

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Juniper	1010	1350	340			Pinion				Pinion I-0 II-0
I-115,	1800	1860	60				700	760	60	I-7 II-1
17, 55, 60	820	1070	250							
-15, 35,	1780	2150	370							
2, 13, 25,	2380	2850	470							
			1490			aster				aster I-14 II-0 I-2 II-14
-35, 40 0, 20, 30 55 55 2, 25 2,										
inion 0 13	2110	2330	220			Juniper				Juniper I-0 II-0 I-1 II-0
										chrys. head I-22 II-[illegible] I-11 II-
										Bitterbrush Purshia - I-0 II-1 I-6 II-1

Chrysothamnus.

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PERM. Date ~~14~~ Oct. 74 Size of quadrat

Field Analysts: Ellis - Ellwood Sheet No. of

Legal description of land P. Juniper T. 15 R. 99W S-12 SWNE

T.B. 355° A. 355° 7%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover:	0	20	1	1	1	1	1	0	1	1
Phlox sp		5					90			
moss sp.		95								
Lithospermum			100						100	50
Townsendia sp.	windblown dust			50						
Eriogonum umbellatum				50						
Lupinus sp.					100	50	10			
Crucifer sp (dissected leaves)						50				
Poa sp.										50

2.2.5-14

2.2.5-1

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley - Sanz Project: 83 Date: 10/13/77
Site: [illegible] Length of Line:
T.: 5 R: [illegible] Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: S'W
General Description of Land: [illegible]
Vegetation Type: Piñon - Juniper Condition of Foliage: Good
Aspect-west Slope 1% 1 of 2

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	~~Diam.~~ In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Paroh. trid	55 1150 1364 1378 1439	58 1120 1370 1389 1481	3 20 6 11 44 17 13 114	18 17	35 8 43	Large				
Pi. ed.	230 1069 1635 1820 2350	375 1226 1817 2310 2560	40 45 11 182 430 170 375	3 2 22 d.b.h. 12 cm		Piñon ~~[illegible]~~	880	920	40	3/2 5
Ar tr.	784 978	806 [illegible]	22 12 34	9 8						4/2 6 105
Purshia	1520 1635	1537 1648	17 13							1/4
hyesth.				1						

ECI

2.2.5-16

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelly Sanz Project: 93 Date: 10-13-74
Site: monument Length of Line:
T: [illegible] R: [illegible] Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: SW.
General Description of Land:
Vegetation Type: [illegible] Condition of Foliage: Good
Aspect- west slope 15%
2 of 2

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
J. os	710	850	140	60 cm 40 cm 70 "	1	Ar tr	2097 2123 2273	2107 2179 2375	9 56 102	5 36 10/15 48/84 84/99
	1910	2090	180	45 " 40 " 58 "	2		2439 2538 2849	2478 2584 2963	39 46 14	
			320						266 34 300	④ ④
						Pin ed.				1/3 ~~3~~ 2 2
				95 cm dia.						
						Gutierrezia				0 0 1 0
						J. os				0 0 1 1
						Pi ed.	1728	1732	4	6 2 2 2

ECI

2.2.5-17

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Permanent Date 10/13/74 Size of quadrat

Field Analysts: Kelley Sanz Sheet No. 1 of 1

General description of land Ridge top (Permanent) Pinyon - Juniper

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	10
Total cover	5%	15%	5%	15%	5%	10%	5%	20%	10%	5%
mat penstemon	[illegible]	20	60	30	T	5	0.5			
Ag. Tr.		40	10		90			50	90	100
[illegible] ([illegible])	100	40		40						
lepidium		T					T			
chaenactis			5							
Draba			5		5					
Penstemon ? other sp.			5	T						
Cryptantha			15					30	5	
Or. hy.				30						
Eriogonum sp.				T	5			10		
Festuca						0.5	5	10		
[illegible]									5	

photo # 3 down transect, roll # 2

ECI

ecology consultants, Inc.

2.2.5-18

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kell.. Cancalosi Project: 23 Date: 10/14/74
Site: Dirmanent Length of Line: 3.1 M 1st G: 2
T: [illegible] R: 69 W Sec.: 9 ¼ Sec.: NW NW Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: [illegible] Condition of Foliage: [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Pinyon						Pinyon				1,
										1, 2
						AMAL	1572	1609	37	3, 3
							1837	1854	17	
							2524	2540	16	
									70	6, 5
Juniper						Juniper	690	775	85	1, 0
									51	
									126	
						Symp				0, 1
										1
						Artr	110	127	17	59, 62
							153	160	7	54, 43
							254	310	46	120
							655	693	38	62
							865	873	8	43
							1279	1286	7	228
							1301	1321	20	
							1442	1471	29	
							1512	1528	16	
							1568	1571	3	
							1611	1692	81	
							2019	2024	5	
							2180	2184	4	
							2543	2558	15	
							2909	2912	3	
									299	

2.2.5-19

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kellen-Cancelosi Project: [illegible] Date: [illegible] /74
Site: [illegible] Length of Line: [illegible]
T: [illegible] R: [illegible] Sec.: [illegible] ¼ Sec.: NW NW Transect Direction: SE
General Description of Land:
Vegetation Type: [illegible] Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pinyon	578	821	243	15c.m		Pinyon	533	602	69	4 3
						Futr	972	1029	57	5
							1039	1057	18	2,7
							1601	1612	11 86	
Juniper						Juniper	2220	2271	51	1
						Amal	1871	1876	5	5 4;6 63
						Artr	160	212	52	
							848	891	43	25, 32 32 120
							1254	1260	6	
							1363	1421	58	
							1576	1599	23	
							1630	1672	42	
							2740	2779	39	
									263 299 562	
						Symph				1

ECI

2.2.5-20

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project [illegible] Site Permanent [illegible] Date 10/14/94 Size of quadrat

Field Analysts: [illegible] Cancelosi Sheet No. 1 of 1

[illegible]al description of land T25 R99W Sec ? [illegible] NW NW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	10	20	15	25	10	30	10	25	25	20
Guti	50									
Festuca	40	25	40	30	90			10		10
Chenopodium	10			20				10		
mat [illegible]		25	10	30	05		20	65	40	40
Poa		40	50	20	05	95	20	10	10	30
Plantain like		10								
chry						05				
Agrsm							60		10	20
Mic poa?								05	40	

ecology consultants, inc.

2.2.5-21

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: ELLIS-ELLINWOOD Project: 83 Date: 10/14/74
Site: PERMANENT Length of Line:
T: 15 R: 99N Sec.: 29 ¼ Sec.: NE SW Transect Direction: 80°
General Description of Land: A. 175° T.D. 80° S. 15°
Vegetation Type: PINYON-JUNIPER Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pinion	1180	1390	210			Arter.	440	515	75	Pursha --- I-3 II-5
I-15, 14,	410	970	570				640	710	70	
20,			780				1060	1160	100	I-0 II-0
							1490	1510	20	
							2310	2410	100	
I-65,									365	
										arter. --- I-18 II-12 ±1
	0	0								I-0 II-0
Juniper	1440	2990	1540							
I-0										
[illegible] 35, 63										
										Cercocarpus I-2 II-0
										I-0 II-0
										Chry. Visc. I-2 II-0
						Persha.	40	140	100	I-0 II-0
							2110	2180	70	
							2210	2245	35	
									205	Juniper - I-0 II-0
										I-0 II-0
										Pinions - I-0 II-2
										~~I~~ I-0 II-0

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PERM. Date 10/14/74 Size of quadrat

Field Analysts: Ellis Bllmwood Sheet No. of

reál description of land pinyon-juniper - [illegible].. T 1 S R 99W S29

T.D. 80° A. 175° Slope 15% NE SW

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total Cover	5	3	0	1	5	0	3	0	0	0
Ac. [illegible]	60	100		100	100	|	100	|	|	
Poa Sp. fendleriana	35					|		|	|	
~~[illegible]~~ koeleria	5					[illegible]		|	[illegible]	
								[illegible]		

22.5 - 23

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley, Sanz Project: 83 Date: 10-16-74
Site: Random P.J. [illegible] on site Length of Line: [illegible]
T: 2 S R: [illegible] Sec.: 4 ¼ Sec.: SE ¼SE Transect Direction:
General Description of Land: Piñon Juniper [illegible]
Vegetation Type: Piñon - Juniper Condition of Foliage: Good
Aspect NW Slope 10%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. ~~In.~~ cm.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pi ed	1360	2220	860	27 cm		Aitr.	1350	1380	30	10 10
	1702	2330	1128	30			1455	1480	25	
	0	0		43			0	0	55	36 34
			1988	20						
				43			0	0		6 0
				53						
				65			0	0		12 4
										64 58
										58
										122
Ju. os.	1170	1360	190	42 cm						
	2850	3000	150	40						
	0	100	100	45		Ce. mon.				1 0
	1050	1180	130	55		Mt. Mah				3 0
			570	33						
				32						
				17		Chryso				1 0
						Pi ed.				1
						1				0 - 0

22.5 - 22

2.2.5 - 24

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Pinton P.J. Date 10-16-74 Size of quadrat ____

Field Analysts: [illegible] Sheet No. 1 of 1

General description of land Pinon - Juniper Hilltop.
N.W. aspect. [illegible] % slope

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Tot. cov.	3%	1%	15%	5%	5%	1%	2%	T	2%	2%
Bouteloua	95	50	80	95	60	100	95		100	95
Ar. frac.	5			5	40					
Si. hy.		45	15				5	100		
[illegible]		5								5
[illegible]			5							

2.2.5 - 24

ecology consultants, Inc.

2.2.5 - 25

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Vallen Sinz Project: 83 Date: 10-16-74
Site: Rawlston P. R. on site ON site Length of Line: 200'
T: 25 R: 99W Sec.: 12 ¼ Sec.: NE NE Transect Direction: W
General Description of Land:
Vegetation Type: P. J.
Condition of Foliage:
Ascent NW Slope 2% [illegible]

MATURE Class 3" plus diam.

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pi ed	93	490	397	33 31		Ar. tr.	80	83	3	17 7
30m	1750	2440	690	50		30 m				4 8
			1087	35						
60m.						60 m	201	250	49 52	13, 3,2
Ju.os.	410	[illegible]	410	51						
30 m	1110	1230	120	37 39						
	[illegible]	[illegible]	70	49 32						
	2740	[illegible]	210							
				51						
	590	960	370	14, 20		Ju os 30 m	1740	1753	13	2
60m	1702	1870	168	10, 30		60 m				
	[illegible]	[illegible]	60	38, 26						
			1408	30, 31						
				37, 30		Pi ed 30 m				1
				68 165		60 m				1 1

ECI
ecology consultants,

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 82 Site m site [illegible] p.j. Date 10-16-74 Size of quadrat
Field Analysts: Kelley Sams Sheet No. 1 of 1
General description of land P.J. forest 500 yds up road from drill [illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOT cover	15 %	10 %	10 %	5 %	5 %	15 %	5 %	10 %	5 %	10 %
[illegible]	100	90		90	100	90	15	50		50
[illegible]	T	10	90	10						
[illegible]		T				5		15		25
Si[illegible]			T							
[illegible]			10	5						
[illegible]				5			T			
[illegible]						5				
[illegible]							80		40	
mt [illegible]							5	15		20
other								10		
[illegible]								5	15	
jun. seedling								5		
draba								T		
mt [illegible]									20	
arenaria									25	
Ag. [illegible]										5

2.2.5-26

2.2.5-21

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Keller-[illegible] Project: 83 Date: 10/16/74
Site: Random - on site ON site Length of Line: 200'
25 R: 19W Sec.: 9 ¼ Sec.: SW SW Transect Direction: SE
General Description of Land:
Vegetation Type: P. J. sage Condition of Foliage: Good
Aspect SE slope 2% 0.2 mi. NE of [illegible]

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.
J. os.	2830 2932	2515 3000	65 68 100 12 371 386	[illegible] 11 14 13 15 21 19	
Pi ct	855 2301	1054 2491	169 190	10 21 18 14	
	100 1001 2465	362 1120 2753	262 119 288 1028	13 18 11 10 15 10 17	
Juni os.	0 810 1120 2034	100 822 1491 2420	100 12 371 386 1871	14 12 11 11 17 23 14	

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
ari. tr.	25 345 701 1140 1514 1732 1914 2001 2062 2158 761 1491 1500	49 370 747 1148 1581 1804 1920 2011 2093 2205 773 1500 1503	24 25 46 8 67 72 06 10 25 17 12 9 3 324	19 16 35 30 18 48 35 20 55 24 14 3 17
Simp.				1/2
[illegible]				1
Amel	1920 2040	1944 2068	24 28 62	3/11
Pl. ct.				6/2/6/4 2/3/4/
J. os	240	257	17	2/1/2/2 4/4/3/3
Chry.				1/2/3

ECI

2.2.5-28

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site random- on site Date 10-16-74 Size of quadrat ____

Field Analysts: Kelley - Sam Sheet No. 1 of 1

General description of land P.J. and sage (.2 mi NE of [illegible]) T2S R99W. Sec 9 ¼ sec SW SW

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
TOT. COV.	2%	5%	25%	25%	15%	5%	10%	5%	1%	5%
mat ([illegible])	80	5	25	T				20		
[illegible]	20	25	65	40	80	90	30	20	100	20
[illegible] chrysothamnus		70	10	10						
[illegible] penstemon		T								
cryptantha				40		10				
eriogonum				5				T		
pinon seedling				5						
Agropyron					10					20
nat. seedlings					10					
pinon seedling							70			
shrubby aster										60

2.2.5 - 2

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Baker Project: 87 Date: 10/17/74
Site: RANDOM ON site Length of Line:
T: 5 R: 19 W Sec.: ~~23~~ 32 ¼ Sec.: NW NE Transect Direction: [illegible]
General Description of Land: random PJ
Vegetation Type: Pinyon - Juniper Condition of Foliage:
[illegible] slope 30 %

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pinus edulis	1750 2750	2480 3000	730 250 980	65 I_1 75 I_2		Atriplex confertifolia	110 290 440 485 605 735 950 1000	190 380 450 495 655 770 980 1050	80 90 10 10 50 35 30 50 355	I_1 57 I_2 2
Juniperus osteosperma	2010	2110	100	55 I_2 45 I_2		Cercocarpus montanus	1190 240 410 840 1020 1535 1860	1250 290 480 970 1040 1750 2010	60 50 70 130 20 125 150 665	I_1 7 11/18 I_1 4 I_2 8 I_2 5
						Artemisia tridentata	400	440	40	I_1 7
						Chrysothamnus viscidiflora				I_1 2 I_2 3
						C. nauseosus				I. 2 II_1 1 I_2 3
						Amelancha	2490	2550	60	I_1 2 II_1 9 II_2 2 I_2 5

ECI

2.2.5 - 30

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PR-PM Date 17 Oct. 74 Size of quadrat ______

Field Analysts: ELLIS - BAKER Sheet No. _____ of _____

General description of land P. J. T 1 S 99 W S 32 NWNE

TP 125° A. 155° S-30%

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
total Count	2	3	0	0	1	0	0	0	0	5
Oryzopsis hymenoides	100	60								100
Hap spin.		40			100					

eroded shale, thin soil (2")

2.2.5-30

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Jim Baker Project: 83 Date: 10/16/75
Site: Random on site Length of Line: 50 m[illegible]
25 R: 3WW Sec.: 4 ¼ Sec.: NW of NE Transect Direction: 125
General Description of Land: [illegible] P.J
Vegetation Type: Pinyon-Juniper Condition of Foliage:
aspect 185 slope 30%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
pinyon	14:0	1500	90	21	I. 1	big sage	40	80	40	I_1 31
					II. 0		400	490	91	
							850	~~290~~	40	II 4
					I		1900	1940	40	
									210	I_2 1
										II 3
						rabbitbrush, chryso viscid				I_1 5
										II 0
										I_2 0
pinyon					I. 0		2880	2925	45	I 1
				I 0	II. 2					
	1790	1820	30	II 20		pinyon				I_1 6
	2290	2490	200	100'						II 2
	420	1090	670	I 35	I					I 0
			900	32						II 0
			220	50						
			1120	40						
				25						
				40						
	0			50		bitterbrush				I_1 2
	1470	1690	220	II 65						II 0
				55						I 0
				55			2050 2390	2110 2400	60 10	II 2

70

2.2.5-32

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 23 Site [illegible] Date 10/16/74 Size of quadrat

Field Analysts: Ellis Baker Sheet No. 1 of 1

General description of land [illegible] P.J. T2S R.99W S.3 NW NE

[illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	5	1	1	0	10	10	2	0	5	5
Oryzopsis hymenoides	100	100	100				100			
Chrysothamnus sp.										
A. tridentata					96	95			95	95
[illegible] sp.					2	5				
Cryptantha sp.					2					
Sitanion hystrix									5	
Festuca sp.										5

2.2.5-3

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Vellen - Cancelosi Project: E7 Date: 10/15/80
[illegible]: Random Length of Line: 30m 155' 2
[illegible]. 3S R: 99W Sec.: 15 ¼ Sec.: SW NE Transect Direction: E
General Description of Land: Rolling hills
Vegetation Type: Pinyon - Juniper Condition of Foliage: Good
Aspect SE Slope 10%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pied	1302 1500 1550	1500 1530 2110	198 30 560 788		0 35 25	Pied	0	0		3,1 2
						Juni				0 1,8
Juni	0 2110	0 2150	40		0 11,10					
						Artr	0 2501 2738	0 2550 2780	49 42 91	0 3,7
						chna	0	0		3,2 6,1
						Putr	0 0	0 0		9 0
						symp	0 2780	0 2832	52	0 1

2.2.5 - 3

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Keller-Cuccalosi Project: E3 Date: 10/15/74
Site: Random Length of Line: 2nd 30 m
[illegible]5 R: 99W Sec.: 15 ¼ Sec.: SWNE Transect Direction: E
General Description of Land: Rolling hills
Vegetation Type: Pinyon-Juniper Condition of Foliage: Good

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pied	0	360	360	25,30		Pied	2760	2845	85	3,6
	2210	2380	170 530 788 1318	24						3,2
						Putr	0 1550 1610 1628	0 1590 1620 1650	40 10 22 72	0 3,4,
	830	1101	271 40 311	25 13		Juos				2
						Artr				7,16 8,3,2
						chwa	1240 1320	1262 1340	22 20 42	10 1

ECI

2.2.5 - 22

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site RANDOM PINYON - JUNIPER Date 10/15/74 Size of quadrat ____

F[illegible] Analysts: Kelley - Cancelosi Sheet No. 1 of 1

General description of land T2S R99W Sec 15 SWNE

Aspect SE Slope 5%. Transect direction E

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total	5	1	T	0	5	1	2	0	1	2
Ar tr	60	100			95		5		100	90
orhy										
Prickl. pear	40									
spheralcea			100			10				
Descurainia like septem Cruciferae					5					
Cryptantha						90				
Guti							95			
Draba										10

ECI

2.2.5-36

Random →

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] - [illegible] Project: 83 Date: 10-14-74

Site: [illegible] Length of Line:

15 R: [illegible] Sec.: [illegible] ¼ Sec.: NW¼NE¼ Transect Direction: [illegible]

General Description of Land:

Vegetation Type: Pinyon - Juniper Condition of Foliage: [illegible]

Aspect 340° 1st 30m 85° last 30m Slope 2%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Juniper	0	30	30			Ephedra —	—	—		Ephedra — I-1 [illegible] II-0
I-10, 50	107	450	80							
40-	1270	[illegible]	130							I-0 II-0
II-50, 80	1940	[illegible]	330			[illegible]				
75,	[illegible]	3000	340							Pinyon I-0 · II- I 0 II-1
I-45, 35	0	200	200							
II-40-	2780	3000	220							
			1330			Pinon	1900	1905	5	Ech. Tri. - I-0 II-0 I-1 II-8
						Chry. Visid.				Chry. Visid. I-0 II-0. I-2 II-
						Scarlet [illegible], [illegible]				Scarlet [illegible] I-0 II-0 I-3 II 0

ECI

2.2.5-37

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site ____ Date 10/14 Size of quadrat ____

Field Analysts: Ellis Ellwood Sheet No. ____ of ____

General description of land P.J. [illegible] T1S. R99W. S.35 NW NE

T.D. 5° IA. 340 - 1st 70 m. 95° - last 30 m. S. 20% (4-5% [illegible] zon.

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
T.C.	15	1	2	10	30	1	2	0	1	1
[illegible]	on				10	1 on				
L. [illegible]	5				40					
Agropyron trachy	5	100		90	50		100			
Hap spin.	10		100							
[illegible] sp.	T			5						
[illegible] sp. - [illegible]				5						
[illegible] sp.									1 on	
Chenopodium sp.										R2

Along ~ side of top of bench above
[illegible] Canal

O. hymenoides
pungens
[illegible]

ECI ecology consultants, Inc.

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Volla Sims Project: 93 Date: 10-13-74
Site: Random Length of Line: 3000'
T: 2S R: 98 W Sec.: 4 ¼ Sec.: SE (S) Transect Direction: 17°11
General Description of Land: [illegible]
Vegetation Type: [illegible] Condition of Foliage: Good
Aspect [illegible] Slope 22

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pi. Et.	103	148	45	1		Pi. Et.	1620	1765	145	2 | 2
				2						3 | 2
				2						
				2						22
						Ar tr	99	120	21.	
							205	218	13.	26
							228	254	46.	
							1960	2001	41.	36
							2177	2204	27.	165
							2290	2508	218.	249
Ar. tr.	0	4	4	239			2320	2335	13.	
	140	151	11.	32			2635	2657	22.	
	455	476	21.				2370	[illegible]	18.	
	740	751	11.	46					419	
	934	937	3.							
	993	1044	51.	47						
	1073	1085	12	165						
	1138	1153	15.							
	1210	1219	9.							
	1423	1471	48.							
	1853	1872	19.							
	2104	2139	35.							
	2157	2193	36.							
	2324	2341	17							
	[illegible]	[illegible]	78							
	[illegible]	[illegible]	11							
	[illegible]	[illegible]	22							
	[illegible]	[illegible]	23							
	[illegible]	[illegible]	31							
			457							
			419							
			876			Cryptotham				2
										1
										0
[illegible]tham	1354	1386	19	3 | 1		J.u OS	240	750	510	5
				2 | 3			2610	3000	390	2
Ju. Os.				2					900	

diam. cl
17
15
12
13

ECI

2.2.5-39

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Random Pinyon-Juniper Date 10-13-74 Size of quadrat

Field Analysts: Kelly Sanz Sheet No. 1 of 1

General description of land 25 - 98 W SE 1/4 of SW 1/4 of Sec. 4 - [illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	5%	5%	5%	5%	25%	10%	1%	1%	15%	10%
[illegible]	5	5			30				5	
Carex	95	90		90	10	90			90	90
Gutierrezia		5	15		10			100		
Bo. gr.			85		40					
Oryz. hym.				10						
Hap. spinulosa					10					
Sit. hi.						5				
Br. te.						10				
Haplopappus.						5				
[illegible]							100			
Stipa									5	5
[illegible]										5

2.2.5 - 40

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Keller - Cancalosi Project: F3 Date: 10/15/74
Site: Random Length of Line: 30m 1st of 2
T: S R: 20W Sec.: 15 ¼ Sec.: SW NE Transect Direction: N
General Description of Land: rolling hills and ravines
Vegetation Type: Pinyon - Juniper Condition of Foliage: Good
Aspect NE Slope 1-5%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pied	1045	1170	125	14 22 17		Pied	2019	2058	39	~~2~~ 3,1
						Artr	1480 1780 2398 2451 2496 2611 2870	1500 1792 2450 2481 2519 2629 2892	20 12 52 20 23 18 22 167 55 222	4,8 19,21 12
Juos	0 2450	2461	11	0 22		Juos	~~2450~~			0 1
						Chla				2

ECI

2.2.5-41

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kellen-Cercalosi Project: [illegible] Date: 10/15/78
Site: [illegible] Length of Line: [illegible]
T: [illegible] R: [illegible] Sec.: 15 ¼ Sec.: SWNE Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: [illegible]-Juniper Condition of Foliage: [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pied	2080	2210	130 125 255	25 13		Pied				2,4,7 3,2
						Amal				1 16
Juni	820	1015	195 11 206	10,10 18,13, 18,20		Juni	0 1520	0 1559	39	1,3 1
						Artr	1470 1500 1725	1500 1510 1740	30 10 15 55	5,0 16,4
						chna	0 1599 1631	0 1618 1659	19 28 47	1,3 2,4
						symp				3,2
						Putr				1

57
20
77

2.2.3 - 42

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site RANdom Date 10/15/74 Size of quadrat

Field Analysts: Kelley - Cancalosi Sheet No. 1 of 1

General description of land T 2S R99W Sec 15 SWNE

Transect direction N.

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	0	T	1	2	2	0	5	1	5	1
Arsm		100								
Eriogonum			100							5
Festuca				100	65					
Artr					35				100	
Draba					T		[illegible]			
Prickly mat							60	60		
Oryzopsis							40	40	[illegible]	T
Aster										95

2.2.3 - 42

2.2.3 = 43

*

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Keller - Cavcalosi Project: E3 Date: 10/15/74
Site: Random Length of Line: 30 m 1st of 2
25 R: 98W Sec.: 3 ¼ Sec.: NW NE Transect Direction: ENE
General Description of Land: Hill top
Vegetation Type: Pinyon - Juniper Condition of Foliage: Good
Aspect SE Slope 5%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pied	0	230	230	40						
	2110	2630	520	65						
			750							
uos	1270	1470	200							
	2630	2820	190	36, 44						1 28
				35						
			390			Artr	30	65	35	9, 39, 7, 38
							185	200	15	44, 69 76
							250	330	80	69
							400	445	45	44
							460	470	10	179
							593	638	45	
							1215	1233	28	
							1340	1450	110	
							1588	1605	17	
							1660	1738	78	
							2150	2175	25	
							2205	2215	10	
							2405	2455	50	
							2583	2635	52	
							2760	2880	20	
									620	

2.2.3

313

2.2.5

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley - Caucalosi Project: 83 Date: 10/15/78
Site: Pa[illegible] Length of Line: [illegible]
T: 5 R: 95W Sec.: 3 ¼ Sec.: NWNE Transect Direction: ENE
General Description of Land: Hilltop
Vegetation Type: Pinyon - Juniper Condition of Foliage: Good - old growth

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Juni	40	420	380 390 770	65 70						
										0 1
						Artr	115	140	25	58, 52 110
							185	260	75	32, 36 68
							340	380	40	
							400	440	40	
						1	454	495	41	1 179
							525	550	35	110
							573	620	57	68
							725	745	20	357
							1045	1085	40	
							1135	1180	45	
							1405	1440	35	
							1485	1495	10	
							1500	1546	46	
							1817	1828	11	
							1843	1900	57	
							1908	1954	46	
							2145	2193	48	
							2265	2350	85	
							2535	2560	25	
							2565	2575	10	
							2610	2640	30	
									821 620 1441	
						Chrysothamnus viscidiflorus				0 1

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site [illegible] Date 10/15/74 Size of quadrat

Field Analysts: Kellen - [illegible] Sheet No. 1 of 1

General description of land T2S R98W Sec. 3 1/4 sec NWNE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total	5	50	10	2	10	1	3	10	0	2
Orhy	35			85						
[illegible]	30	20	15							
Cryptantha	10	35	75				60			
Agsm	35				15		T			
Festuca		30			60		40	15		
Guti		15	5				[illegible]	20		
Draba		T								
Artr seedling			T							
Sitanion hystrix			5		10	100				
Chenopodium alb.				15						
Poa					15					
[illegible]loua gracilis								65		
Carex										100

2.2.5 - 46

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: 53 Date: 10/15/80
Site: [illegible] Length of Line: 30 m 150 ft
25 R: 94W Sec.: 9 ¼ Sec.: NE NE Transect Direction: NE
General Description of Land: low ridge
Vegetation Type: Pinyon. Juniper Condition of Foliage: [illegible]
Aspect SW Slope 5%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
ied	620	1450	830	75 53						
						Ardr	1720	1750	30	1 7
uos	250 2060 2450	330 2270 2700	80 220 250 550	95 85						

2.2.5 - 46

ECI

2.2.5-47

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: #3 Date: 10/15/74
Site: [illegible] Length of Line: 200 [illegible]
T: 2S R: 95W Sec.: 9 ¼ Sec.: NENE Transect Direction: N
General Description of Land:
Vegetation Type: Pinyon - Juniper Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Pied	2970	3000	30	22						
	1270	1470	200	72 49 46	35 55 20	Artr				2 10,16
	2730	2765	35	24			2070	2105	30	
	2785	2880	95	17 80						
			330 550 880							

2.2.5

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project #3 Site RANDOM [illegible] Date 12/15/80 Size of quadrat

Field Analysts: [illegible] Sheet No. 1 of 1

General description of land [illegible] ridge

T2S R98W Sec 9 ¼ NENE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total	5	0	2	10	5	3	1	5	1	5
Arar	65							95		
Draba	35				5			5	5	
unknown composite shrub	T					50				
Agtr			100	100	40	30			20	
Festuca									75	
Mat Penstemon					55					
Cryptantha						10	60	100		
Erigeron						10	40			

#

Rankin - Pinon-Juniper

2.2.5-49

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] - [illegible] Project: 43 Date: 10-1[illegible]-74
Site: Outside C-a Pinon Juniper Length of Line: 60 meters
T: 2S R: 98W Sec.: 6 ¼ Sec.: SW¼ of NW¼ Transect Direction: 125°
General Description of Land: Aspect 75° - Slope 15°
Vegetation Type: Pinyon - Juniper Condition of Foliage: Dormant

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Osteosperma	[illegible]	570	210			Art.	0	50	50	Art I-8
Juniper.	1420	1500	80				155	225	70	II-8
I-0	1500	1860	360				425	442	17	I-20
II-0	2530	2910	380				1449	1500	51	II-13
I-45, 42, 20			1030				1755	1825	70	Tetradymia. can
~~[illegible]~~							2700	2720	20	II-1
							2740	2780	4th 5 40	3M
65, 100						Chrysos	425	442	17	Pinon I-1
							525	562	37	II-8 5
II-40							1930	1985	55	I-1
										II-2
							1114	1175	60	
							2285	2300	15	Purh - I-0
									154	II-1
						Juniper	No on 1st 50			[illegible]
							0	0		
Pinon										Juniper - I-1 Osteosperma II-
						Tetra. can.	No on 1st 50			I-0
							1015	1075	60	II-1
										Conf. I-0 II-0 I-0 II-1
						Pinon	No on 1st 5M			Juniper - I-14
							[illegible]	2712	2nd 15	II-13
							0	0	110	I-8
							0	0		II-12
										Amel. I-0 II-0 I-0 II-3

ECI

2.2.5 - 50

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 93 Site ______ Date 10/12/74 Size of quadrat ______

Field Analysts: [illegible] and SG Sheet No. ______ of ______

General description of land pinyon-juniper T 2 S, R 93 W, SW1/4 of NW Quarter. S [illegible] slope. T.725° Aspect 150 Slope 15%

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total cover	10	2	4	3	4	0	10	5	10	3
Gutierrezia sarothrae	75						90			
Bouteloua sp.	25		100	50			5			
Euphorbia sp.		80								
Agropyron [illegible]				15				25	10	
Oryzopsis hymenoides				15						
[illegible] sp. ??		20			T					
Eriogonum sp. (big [illegible])				20	30					
[illegible] spinulosus					20			25	40	
Opuntia sp.							5			
Arenaria sp. (spin)								50		
[illegible] sp. (dense [illegible])									50	100

Oenothera sp.
[illegible]

Antennaria sp.

[illegible] Sandstone - coarse

ECI
ecology consultants, inc.

225-53
2.2.5-51

Random - P.J.

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] - Ellenwood Project: 83 Date: 10-15-74
Site: Duck creek - Smith ranch P.J Length of Line: 60 meters
T: 15 R: 99W Sec.: 12 ¼ Sec.: NW¼ NW¼ Transect Direction: 165
General Description of Land: [illegible] eroded. - Soil Sand - clay - Sandstone gravel
Vegetation Type: Pinion - Juniper Condition of Foliage: Dormant - Seedling

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Juniper	530	890	350			Mosha whiteflat.				Eurotia I-5
I-0	1910	2300	390							II-2
II-15cm			740							I-0 II-0
I-25,40, 20,										
II-60,										Atriplex confertifolia-I-0 II-1
										I-0 II-0
						aster sage	755	790	35	aster I-34
							1370	1380	10	II-66
							1690	1740	50	I-60
							1960	1980	20	II-13
							2190	2210	20	173
							2260	2280	20	
							2350	2365	15	Juniper-I-1
							2540	2560	20	I-0
							570	625	55	
							840	890	50	I-0
							930	1010	80	II-1
							1270	1280	10	
									385	

7

last 30 meters of Transect has been disturbed—
many of the larger Juniper trees have been uprooted

(ECI)

2.2.5-52

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Ravens Date 16 Oct. 74 Size of quadrat

Field Analysts: Ellis Ellerwood Sheet No. of

General description of land pinyon - juniper (S. facing) - vic. No Trespassing Site on [illegible] Creek. upper 15m disturbed by bulldozer A. 165 T.D. 1650 T.1S R. 99W S. 12 NWNW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
total cover	.5	2	1	0	0	1	0	2	3	30
Phlox sp	100	20	50							
Gutierrezia sarothrae		80	50			100		50	80	20
Sitanion hystrix		20								
Salsola kali								60		
Draba sp.									5	T
Lithospermum sp									15	
Mentzelia sp.										80

Penstemon sp.

Ar. arbuscula

Soil: broken - sandstone loose clay loam eroded

ECI

22.5 - 53

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Baker Project: 83 Date: 17Oct 74
Site: Random Length of Line:
15 R: 49W Sec.: 3 ¼ Sec.: NW-NW Transect Direction: 115
General Description of Land: random - P. J.
Vegetation Type: Pinyon-Juniper Condition of Foliage:
Aspect 360 Slope 10%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Pinus edulis	1285	1750	465	40 I_1		Pinus edulis				I_1 1
	2180	2830	650	30						I_2 1
			1115	32 II_1						II_2 1
				25						
				45						
						Atriplex confertifolia				I_1 1
						Purshia tridentata				I_1 1
				20 I_1						
niperus	405	435	30	30						
	1150	1265	115	32		Juniperus				I_2 2
	190	390	200	20						
	820	1120	300							
	2000	2130	130	25 I_2						
	2220	2330	110	20						
	2510	2940	430	20		Artemisia				I_2 1
			1315	50						
				40 II_2						II_2 3
				40						
				65						
						Cercchrons				II_2 4

ECI

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 93 Site [illegible] Date 17 Oct 74 Size of quadrat ______

Field Analysts: Ellis - [illegible] Sheet No. ______ of ______

General description of land P. J. T. 1S R. 99W S. 3 NWNW

mature T [illegible] 115° A 360° S 10%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
[illegible]	3	1	1	5	1	2	3	5	20	1
Poa sp.	100	100	100	75	80	85	40		90	
[illegible]				20	90					
[illegible] sp.				5						
[illegible] sp.						15				100
[illegible] sp.							10	50	10	
[illegible]								50		

Carex sp.

[illegible] [illegible] [illegible]
[illegible]

ecology consultants, inc.

Random PJ *

2.2.5 - 55

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: 43 Date: 10-14-74

Site: [illegible] Random Length of Line: 60 Meters

T: [illegible] R: [illegible] Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: 105°

General Description of Land: [illegible] 67° [illegible] 15% [illegible]

Vegetation Type: Piñon - Juniper Condition of Foliage: Dormant

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Juniper II-40	[illegible] 870 1670	[illegible] 950 [illegible]	100 80 420 600			Piñon				Piñon I-6 II-1 I-0 II-0
I-10 II-95						Arte. sage				arter I-7 II-7 I-5 II-4
						Chry. Visid. (Rabbitbrush)	430 1690	450 1770	20 80 100	Chry. Vis. I-25 II-15 I-12 II-12
						Ostesperma Juniper				Ostro. Sperma I-2 II-0 I-0 II-0
						Tetradema Horsebrush				Tetradema I-5 II-14 I-0 II-0
						Art. Frig.				Art. Frig I-0 II-1 I-0 I-0

2.2.5-55

ECI

2. 2. 5 – 56

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Random ~~[illegible]~~ Date 10/14/76 Size of quadrat

Field Analysts: S Ellis Ellwood Sheet No. 1 of 1

Legal description of land R - P. Juniper T 13 R 92W S25 1
T.D. 105 [illegible] S15%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	7	0	5	2	2	0	5	0	2	5
[illegible]	80	'	50	50			20	50		20
Sitanion [illegible] (long grass)	20				80		50	20		
H. [illegible]			50				30			
[illegible]				30	20					
Cryptantha sp.										50
Oenothera sp.										30

Gutierrezia Penstemon [illegible] [illegible] pinyon
S. hystrix (1 tree)

2.2.0 I
2.2.2

*

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Random - Pinõn-Juniper

Field Analyst: [illegible] Ellenwood Project: #5 Date: 10-14-74
Site: Pinion - Juniper Random Length of Line: [illegible]
T: 15 R: [illegible] Sec.: 21 ¼ Sec.: NW NW ¼ Transect Direction: [illegible]
General Description of Land: [illegible] - Slope 1-5%
Vegetation Type: Pinyon - Juniper Condition of Foliage: [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Pinion I-13,	1860	1900	40			Pinion	875	915	40	Pinion I-2 II-5
II-45										I-3 II-3
						[illegible]	865	890	5	[illegible] I-1 II-0
							1915	[illegible]	310	I-7 II-11
							1670	1700	30	
							2080	2090	10	
									355	
						Juniper	2750	2970	220	Juniper I-1 II-0
Juniper	110	150	40							I-0 II-1
I-35,	1760	[illegible]	370							
27, 11,	3950	[illegible]	50							
37, 40,	0	195	195							
	355	615	260							
II-27, 20,	935	1410	475							[illegible] I-5 II-0
45, 40, 20	1700	2540	840							
24, 17.			2230							I-2 II-4
I-25, 20										
35, 40, 35										
30										

ECI

2.2.5-58

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Random 2-I Date 10/14 Size of quadrat

Field Analysts: SLE Ellinwood Sheet No. 1 of 1

Legal description of land pinyon-juniper – Random T7S, R99W. S21? (see drive site)
T-R 3160 A. 240 S. 1-3%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	5	4	10	2	3	5	0	5	10	3
Bout. gr. Artemisia	50			90		50				
Ag. ~~[illegible]~~ [illegible]	50	50	100			~~40~~ 20		80		90
Haplo. Spin.		50								
Antennaria sp. (tomentose)				5						
Oryzopsis hymenoides					100					
Lupinus sp.						10				
Arenaria sp. (short sp)						20				
~~[illegible]~~ Sp. Poa secunda								80	65	
Balsamorhiza sag.									10	
Erigeron pumilus??									10	
Antennaria sp. (glabrous)									15	
Eriogonum umbellatum										10

Balsamorhiza

Juniper [illegible]

2.2.5-58

Rabbitbrush (2.2.6)

35 [illegible] *
15 [illegible]

2.2.6-7

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] - SE Project: 83 Date: 10/12/74
Site: Paramount Length of Line: 300'
T: 6S R: 99W Sec.: 35 ¼ Sec.: SW¼ NE¼ Transect Direction: 250
General Description of Land: [illegible] 1510
Vegetation Type: [illegible] Pinon Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
						Chrys. vis.	60	75	15	Chrys. nau.
							310	395	85	I - 94
							440	475	35	II - 120
							610	615	5	I - 83 I - 55
							765	830	65	
							960	1050	90	Chrys. - I - 1
							1260	1270	10	I - 3
							1300	1340	40	
							1380	1435	55	I - 1
							1490	1500	10	I - 2
							1500	1520	20	
							705	[illegible]	30	
							1765	1800	35	
							2000	2015	15	
							2190	2240	50	
							2320	2355	35	
							2490	2505	15	
							2535	2600	65	
							2640	2670	30	
							2770	2825	55	
							2890	2950	60	
							2970	3000	30	
						Chrys. NO	95	105	10	
							175	190	15	
							270	290	20	
							310	400	90	
							435	460	25	
							520	585	65	
							690	715	25	
							1050	1160	110	
							1220	1240	20	
							1420	1500	80	
							1540	1640	100	
							1640	1675	35	
							1760	1810	50	
							1920	1970	50	
							2040	2110	76	
							[illegible]	[illegible]	65	
							2670	2710	40	
									1726	

burned stumps of small [illegible].

(5)

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Permanent Rabbitbrush Date 10/12/74 Size of quadrat –
Field Analysts: SLF & SF Sheet No. 1 of 1
Legal description of land rabbitbrush – permanent T1S R99W sec 35 [illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
T. Cover	30	70	15	10	40	5	5	10	3	50
Elymus cinereus	50		95		90				15	75
Ag smithii	10	10		95		100	100	100	80	
Poa sp. pratensis??	40	90	5	5	10	—			10	25

ECI
ecology consultants, Inc.

2.2.67 2-

*

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis-Baker Project: 83 Date: 10/16/74
Site: R.B. ON site Length of Line:
35 R: 99 W Sec.: 33 ¼ Sec.: NE SE Transect Direction: 90°
General Description of Land: A. 150° S 22%
Vegetation Type: Rabbit Brush Condition of Foliage:
Aspect 150° Slope 22%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						C. nauseosus	0	440	440	I_1 71
							470	510	40	I_1 55
							530	800	270	I_2 58
							955	1080	125	I_2 58
							1245	1316	71	
							1270	1350	80	
							1400	1480	80	
							1550	1615	65	
							1750	1760	10	
							1910	1920	10	
							2050	2080	30	
							2115	2230	115	
							2290	2345	55	
							2545	2660	115	
							2830	2880	50	
							2960	3000	40	
							0	100	100	
							110	150	40	
							200	285	85	
							330	345	15	
							390	565	175	
							600	685	85	
							850	1020	170	
							1160	1260	100	
							1320	1350	30	
							1425	1450	25	
							1475	1485	10	
							1530	1700	170	
							1730	1840	110	
							1925	2170	245	
							2255	2350	95	
							2475	[illegible]	270	
							2595	2645	50	
							2780	2820	40	
							2985	3001	15	
									3426	

2.2.6-4

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site pcmn Date 10/16/74 Size of quadrat ____

Field Analysts: Ellis - Baker Sheet No. ____ of ____

General description of land Rabbitbrush.

T.D. 90 A. 150° S. 2-20 T.1S R99W S 33 NESE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	0	25	30	25	15	15	10	10	5	5
Elymus cinereus		100	100	100	100	100	100	100	100	100

Has been burned, old sage stumps

2.2.6-3

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelly Sanz Project: 83 Date: 10-13-74
Site: random rabbitbrush Length of Line: 3000'
T: 8 S R: 99 W Sec.: 14 ¼ Sec.: SE of NW Transect Direction:
General Description of Land: Side Springs bottom
Vegetation Type: rabbitbrush, sage 'Condition of Foliage:
Aspect all slope < 1%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	xcurore unit ~~Diam.~~ ~~In.~~	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Chrysothamnus	0	30	30	45		Chrysothamnus	0	70	70	77
	55	215	160	46			90	130	40	60
	215	275	10				150	171	21	
	324	351	27	40			190	270	80	63
	390	595	205	46			295	390	95	68
	610	705	95				407	580	173	
	780	890	110				630	721	91	
	990	1011	21				755	815	60	
	1130	1270	140				838	890	52	
	1570	1645	75				1030	1040	10	
	1801	1865	64				1070	1150	80	
	1960	1975	15				1190	1260	70	
	2132	2204	72				1330	1340	10	
	2245	2370	25				1430	1480	50	
	2395	2411	16				1780	1825	45	
	2421	2425	4				1940	1978	38	
	2500	2511	11				1991	2010	19	
	2560	2610	50				2130	2135	5	
	2675	2710	35				2330	2385	55	
	2732	2745	13				2468	2470	2	
	2760	2801	41				2670	2708	38	
	2825	2850	25				2725	2750	25	
	2882	2898	16				2780	2804	24	
	2936	2971	33				2850	2894	44	
	2990	3000	10						1197	
			1464						1464	
									2661	
										34
Art. trid.	749	760	11	27		Art trid.	895	1010	115	20
	1001	1130	129	26			1615	1655	40	
	1270	1300	30				1795	1809	14	40
	1455	1500	45	29			2095	2145	50	68
	1500	1550	50	33			2230	2320	90	
	1650	1790	140				2498	2605	107	
	1979	1998	19				2960	3000	40	
	2020	2035	15						456	
	2070	2085	15						466	
	2906	2918	12						922	
			466							

ECI

2.2.6-7

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site nwm Date 10-13-74 Size of quadrat ____
Field Analysts: Kelly, Sams Sheet No. 1 of ____
General description of land rabbitbrush bottom (stake springs gulch)
T: 2S R: 99 W Sec: 14 SE 1/4 of NW 1/4

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	10
TOTAL COVER	0	0	5%	10%	20%	T	5	3	1	10
lepidium			100							5
grass ?				100	70					
Ast ?					30	100	100	100	100	80
Aster										15

ecology consultants, Inc.

2.2.6-8

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Baker-Ellis Project: F3 Date: 10/13/74
Site: Random on site Length of Line: [illegible]
T: 2S R: 24W Sec.: 4 ¼ Sec.: SESW Transect Direction: 530
General Description of Land: [illegible]
Vegetation Type: Rabbitbrush Condition of Foliage:
Aspect 145° slope 32%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
						C. naus.	25	85	60	I_1 40
							70	80	10	
							340	450	110	
							710	750	40	II_1 31
							850	905	55	
							930	1015	85	I_2 79
							1110	1240	130	
							1250	1540	260	II_2 67
							1910	2060	150	
							2180	2270	90	
							2480	2720	240	
							2855	2935	80	
							0	125	125	
							180	230	50	
							320	340	20	
							370	450	80	
							470	520	150	
							780	820	40	
							850	960	110	
							[illegible]	[illegible]	210	
							1250	1260	10	
							1850	1870	20	
							1900	2020	120	
							2290	2560	270	
							2630	2675	45	
							2770	2810	40	
							2820	2860	40	
							2890	2950	60	
									2700	
						Artem.	15	30		2
							450	460	10	II_1 2
							2570	2630	60	I_2 2
									70	II_2 14
						Sarco.				I_1 1
										II_1 3
										II_2
						Atriplex canescens				II_2 1

ECI

2.2.6-4
2.2.6-7

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project O? Site Paraho Date 17 OCT 77 Size of quadrat

Field Analysts: Ellis - Siebert Sheet No. of

General description of land Rabbitbrush
T. R. 50° A. 145° S 3%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	10	5	25	20	10	0	10	0	0	0
K. scoparia	100	150	100	50	100					
Elymus cinereus				50						
C. nauseosus albicaulis							100			

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis-Baker Project: 03 Date: 17 OCT-74
Site: Kaneohe [illegible] site Length of Line:
T: [illegible] R: [illegible] Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: 290
General Description of Land: [illegible] R [illegible]
Vegetation Type: Rabbitbrush Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						C. nauseosus	975	[illegible]	20'	I₁ 6
							2075	2090	15'	II₁ 15
							2615	2620	5'	I₂ 13
							160	320	160'	II₂ 42
							1035	1050	20'	
							1115	1270	155'	
							1895	1995	100'	
							2365	2380	15'	
									490	
						[illegible]	1040	[illegible]	55	I₁ 2
							1540	1570	30	II₁ 2
									30	I₂ 0
							2010	2040	20	II₂ 10
							2465	2485	135	

2.2.6-10

ECI

Ecology Cons

2.2.6 - 4
2.2.6 - 11

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project O2 Site [illegible] Date 17 Oct. 74 Size of quadrat ______

Field Analysts: Ellis - Bates Sheet No. 1 of 1

General description of land RABBITBRUSH

T.D. 290 A 55° S 3% T1S 99W S33 SE SW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
T. Cover	15	2	2	15	4	5	1	5	70	10
Elymus cinereus	100	100	100	100	40	100				100
Bromus tect					10		100			
Po. [illegible]					50			100		
Chrys. nau. Seedl:										
									100	

Riparian (2.2.7)

~~2.2.8-4~~
2.2.7-1

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

roject 83 Site prm. rip. Date 10-13-74 Size of quadrat

e Analysts: Kelly Sanz Sheet No. 1 of 1

eneral description of land riparian bottom

T2S R99W Sec 14 ¼sec SW-NW · Stake Springs

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOTAL COVER	95%	90%	80%	90%	95	70	90	80	95%	95
Cyperaceae ([illegible]	45	50	30	25	~~F~~ 95		15	30	100	[illegible]
Juncus ? [illegible]	--		10			45	25	15		
[illegible] plantain	T		10				~~T~~	20		10
Rorippa - [illegible]		50	40		5					
Succulent [illegible] leaves			5							
[illegible] ?			5							
[illegible]				5						
Triglochin maritima						20	25	15		
[illegible]						20				
Hordeum jubatum						=		5		
Agrostis —							25	10		
Ranunculus ?								5		5
~~[illegible]~~ -										
Malo										5

2.2.8 4

*

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: SE & Ellis Project: 83 Date: 10-12-74
Site: Permanent Length of Line: 60 Meters
T. 15 R: R98W Sec.: 29 ¼ Sec.: NW¼ SW¼ Transect Direction: 230°
ral Description of Land: Aspect 195° - Slopes >1%
Vegetation Type: ~~Rabbit brush Sage~~ [illegible] Condition of Foliage: Dormant - autumn

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Art.	0	0		Art. I - 2,1 0
							140	150	10	II - 7,1
							0	0		I 4,1
							2894	2980	96	II - 103,15
									106	Chry. ~~nauseosus~~ visc.
										I 2,1
										II 16,8
										I 16,18
										II 3,1
						Art. Measured 885				
						Chry.	0	0		
							430	475	45	
							490	520	30	
							680	700	20	
							750	765	15	
							785	880	95	
							540	590	50	
							904	1025	121	
									376	

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

roject 83 Site C-a Date 10-12-74 Size of quadrat
Sheet No. 1 of 1
d Analysts:
eneral description of land Cleared - Grazed T1S R98W Sec 29 ¼Sec NWSW

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total Cover	5%	10%	Stream°	10%	75	15	20	25	40	40
Bite.	50%		1							
Hgcr.	50%	5%				90		15	5	
~~Total cover~~		~~10%~~	1							
Ambrosia - Ragweed			1							
~~Ag. cr~~										
Ag. Sm.		5%	1							
El. ci.		85%								
Chenopod album	Trace 5%	↓					10		5	
"Ag. Tr." intermed.				50%	75		40			30
-Brom. in.				50%	25					
[illegible] sp.						10				
Salsola Kali							50	85	50	70
Artemisia ludoviciana									20	

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Random Riparian Date 10/15/74 Size of quadrat

Field Analysts: Kellen-Cancalosi Sheet No. 1 of 1

General description of land T2S R99W Sec 12 NW SE
Spring site in Stake Springs Draw

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	100	80	55	85	95	70	50	45	80	100
Taraxacum	5	5								5
Poa	1	1	2	T	T	15	30		95	70
Arrow	1									
Bromus inermus	85	65	50	20	70	80				
Plantago	10				15	5				5
Hordeum [illegible]					5	T				
Ranunculus [illegible]		T			T					
Wide leaf ~~[illegible]~~ dock		~~20~~	[illegible]	[illegible]						
Rumex crispus?			5	5	5			5	5	
Scirpus Δ stem		20	45	75	T		65	80		10
Cyperus					5		5	10		
Typha						T				
							T			
					T			5	T	
Aasm								+		
Senecio										10

2.2.7-4

ECI
ecology consultants, Inc.

2.27 - 5

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 93 Site Random Riparian Date 10/15/74 Size of quadrat

Field Analysts: Keller - Cancalosi Sheet No. 1 of 1

General description of land Valley Floor -

T1S R99W Sec 30 ¼Sec NW SE

Species	Quadrat Number Alkali 1									
	1	2	3	4	5	6	7	8	9	0
Total cover	99	100	100	90	35	15	40	2	1	75
water grass	90	100	50	5		5		T	30	45
Poa	10									
Hordeum	T	T	5		50	5			T	5
Ranunculus aquatilus	T		30	[illegible]	10	T+	50			45
schenodorus [illegible]		T	15	T		T	50	50		
Scirpus X				65	30	70				
chenopod					5	20		50	20	
Bromus tec								T	T	
seedling									50	
AgRe										5
Ag cr										T

Tamarix pentandra

2.2.8

Sagebrush (2.2.8)

2.2.0
2.2.0
2.2.0

Perm

(1)

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: SLB + SE Project: 83 Date: 10/17 79
Site: [illegible] Length of Line: [illegible]
T: [illegible] R: [illegible] Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: [illegible] pinon Condition of Foliage: [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
						Artr	190	355	65	Artr I - 38,3
							280	330	50	
							470	510	70	I - 37,47
							725	760	35	
							510	540	30	I - 44,46
							750	800	50	
							[illegible]	[illegible]	40	II - 51,53
							[illegible]	[illegible]	90	
							2160	2225	35	
							2245	2255	10	
							2385	2420	35	Chryn I 30,3
							0	20	20	
							[illegible]	[illegible]	70	II - 15,
							[illegible]	[illegible]	30	
							340	[illegible]	70	I - 19,1
							[illegible]	[illegible]	145	
							[illegible]	[illegible]	10	= 8,5
						?	[illegible]	[illegible]	70	
							2450	2460	60	
							2525	2530	5	[illegible] I 0,1
							[illegible]	[illegible]	35	
							[illegible]	[illegible]	25	= 7,1
									1110	
						Chry-na	7555	[illegible]	10	I - 1,8
							[illegible]	[illegible]	5	
							[illegible]	[illegible]	20	I 0.1
							[illegible]	[illegible]	60	
									95	[illegible] I - 0
										II - 0.
										= 0.0
										= 0.0
										Spen I 0,
										= 0,0
										I - 1,0
										I 0.0

ECI

2.2.6 4

①

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: ________ Date: 6/12/81

Site: [illegible] Length of Line: ________

T. 15 R: [illegible] Sec.: 33 ¼ Sec.: [illegible] Transect Direction: [illegible]

General Description of Land: ________

Vegetation Type: [illegible] Condition of Foliage: ________

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
										Juniperus I - 00 II 00 I 00 II 1,0

2.2.6 7

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site ____ Date 10/12/74 Size of quadrat ____

Field Analysts: SCM - SB Sheet No. ____ of ____

General description of land [illegible] T. R. S.

T-P · 350° (NNW), Aspect / Aspect 270° (W) · Slope - 1-3%.

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	2	4	30	30	15	20	50	20	20	10
Arenaria sp	100			30	15	75	15	20	15	30
Draba sp.		50			10	T		5		
Agropyron smithii		30		25	40	10	10	10	15	25
Gilia sp		20								
Lichen		T								
Moss			100	15			30	50		
Opuntia polyacantha A				15			20			
Eriogonum ovalifolium B				5						
Astragalus sp. C				5	5			5		5
Haplopappus spinulosus D				5	5	5			5	
Cryptantha sp.					15				20	
Poa sp.					10		10	5	10	1 m.
[illegible]						5				
Sphaeralcea						6				
Koeleria cristata							15		5	
Townsendia incana								5		

O. hymenoides

2.2.0 7

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley Sanz Project: 83 Date: 10-16-74
Site: [illegible] on site Length of Line: 200' 60 yards
Field 25 R: [illegible] Sec.: 10 ¼ Sec.: NE ¼ SW Transect Direction:
General Description of Land: [illegible]
Vegetation Type: [illegible] Condition of Foliage: good
Aspect NW Slope 2% on [illegible] dull and [illegible] to [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

1st 30 m Species	I1	I2	I2-I1	average ~~Diam.~~ In.	Basal Area Sq. Ft.	2nd 30 m Species	I1	I2	I2-I1	Number Per 50' Units
Art. trid.	455	470	15	34			24	60	36	29
	510	520	10	26			241	300	59	47
	578	585	7				552	574	24	32
	1670	1757	87	43			731	781	50	20
	1789	1825	36	34			886	895	9	
	1970	1988	18				940	1009	69	
	2048	2101	53	137			1225	1233	8	
	2147	2183	36				1622	1634	12	
	2491	2562	71				1782	1895	13	
	2867	2910	43				1990	2010	20	
	2943	3000	57							
			433						300 433 733	
vos ?										1
Chrysotham.	1418	1440	22		4 9					4,4
	1549	1568	19		10 3					5,10
	1655	1685	30							
			71							
[illegible] ed.			2							1

ECI

ecology consultants, inc.

2.2.8.-5

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site per. on. site, [illegible] Date 10-16-74 Size of quadrat

Field Analysts: Kelley, Sanz Sheet No. 1 of 1

[illegible]al description of land T: 2 S R: 99 W sec. 10

to N W. side of road. [illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOT. cover	10%	10%	10%	T	25%	10	5	20	10	50
Agropyron [illegible]	70	10	50					T		
[illegible] root	30	20		50		80		20		10
[illegible] aster	T	10								
Stipa comata sp.		10								15
Penstemon		10	10						40	15
Astragalus		10								
[illegible]		10	30	50	75				60	50
Antennaria		10							T	T
Erigeron		T			T			5		
Oryzopsis hymen.			10			5	50	30		
Lupine					10			40		
oxytropis					15	15	50			10
Cryptantha								5		
E. [illegible]								T		
~~Gutt~~									~~T~~	~~T~~

II-D
Permanent

2.28-7
2.2.8 = [illegible]

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: 83 Date: 10-15-74
Site: C-a - Sage on site Length of Line: 60 meters
T: 15 R: 99W Sec.: 34 ¼ Sec.: SESE Transect Direction: 25°
General Description of Land: A25° S. 3%
Vegetation Type: Sage Condition of Foliage: Dormant

MATURE Class 3" plus diam.						Reproductive class 3' high < 3" diam.				
Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
						Arter:	60	110	50	Arter:
							165	240	75	I-166
							280	315	35	II-120
							370	410	40	95
							450	475	25	270
							560	590	30	
							640	675	35	
							800	840	40	I-116
							1080	1130	50	II-69
						1st 30	1180	1240	60	
							1370	1420	50	
							1580	[illegible]	80	
							1730	[illegible]5	45	
							1940	[illegible]	140	Chry. Nas.
							2140	2170	30	I-0
							2195	2450	255	II-0
							2520	2533	13	
							2590	2670	80	I-0
							2800	3000	200	II-9
							030	090	30	
							110	170	60	19
							275	300	25	166
						2nd 30	320	720	400	210
							830	1300	470	116
							1930	2205	275	69
							2280	2560	280	562
							2610	2620	10	
							2730	2760	30	
									2913	
						Chry. Nas.:	2585	2620		
									35	

ECI
ecology consultants

2.2.8 – 9
2.2.9 – 8
2.2.8 – 1

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PERM Date 15 Oct, 74 Size of quadrat

Field Analysts: Ellis Ellinwood Sheet No. of

General description of land Bottomland Sage

T.D. 253° A. 25° S. 3%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	2	1	2	2	3	1	2	0	0	5
Ag. trachy.	100	100	100	100	100	100				100
Oryzopsis hymenoides (streambed)							100	Streambed		

ECI
ecology consultants, Inc.

2.2.4-8

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Baker Project: 83 Date: 10/16/74
Site: Remnant on tract Length of Line:
T: 1S R: 99W Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: 185°
General Description of Land: [illegible] A 140° S 20%
Vegetation Type: Sagebrush Condition of Foliage:
Aspect 140° Slope 2%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
	450	490	40				60	190	120	
	495	510	15			Sage	315	350	35	I₁ 91
	750	870	120			Art. tri	490	570	80	II₁ 134
	1160	1250	90				590	630	40	I₂ 110
	1480	1660	180				680	720	40	II₂ 140
	1680	1870	190				930	970	40	
	1915	2010	95				1035	1070	40	
	[illegible]	2125	70				1285	1310	25	
	2145	2210	65				1400	1440	40	
	2455	[illegible]	70				1520	1580	60	
	[illegible]	[illegible]	45				1630	1670	40	
	[illegible]	2910	270				1720	1880	160	
	2960	[illegible]	25				1940	2260	320	
			1275				2320	2350	25	
							2430	2520	90	
							2555	2625	70	
							2680	[illegible]	70	
							[illegible]	[illegible]	40	
							[illegible]	[illegible]	45	
							70	215	145	
							260	365	105	
									1630	
						Greasewood	890	960	70	I₁ 21
						Sarcob.	1240	1290	50	II₁ 2
									120	I₂ 9
										II₂ 4
	1260	1295	35			Rabbitbrush	190	210	20	I₁ 10
	2535	2550	15			Chryso.	370	400	30	II₁ 25
	2300	2335	35				0	60	60	I₂ 29
			85				620	680	60	II₂ 29
			215				700	735	35	
			300				910	920	10	
									215	
						4 wing saltbush				I₁ 6
						Atriplex ?				II₁ 3
									10	I₂ 2
							435	445	I₂ - II₂	II₂ 3

ECI

2.2.8-9

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PERM. Date 10/16/74 Size of quadrat

Field Analysts: ELLK-BAKER Sheet No. 1 of 1

al description of land Sagebrush. T. 4S R.94W. S. 33 SE SW

T. D 125° A. 140 S. 200

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	0	0	0	0	0	0	1	0	0	0
Br. tectorum							100			

ECI

ecology consultants, Inc.

2.2.8-10

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley - Saiz Project: 83 Date: 10/16/74
Site: Permanent on site ON site Length of Line: 60 M 1 of 1
T: 25 R: 77W Sec.: 8 ¼ Sec.: SW SE Transect Direction: NW
General Description of Land: small brush area on NW facing slope
Vegetation Type: Sagebrush Condition of Foliage: Good
Aspect NW Slope 2% near [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	crown ~~Diam. In.~~	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
art. tr.	103	160	57	58 }		Cut. tr.	74	91	17	46 40
	710	734	24	42 }			230	270	40	42 43
	1126	1150	22				694	701	7	
	1180	1201	21	49			830	850	20	
	1209	1308	9	44			1152	1153	11	
	1610	1684	74				1145	1591	46	
	1755	1770	15				1701	1750	49	
	1809	1823	14				1848	1860	12	
	1840	1852	12				1870	1900	30	
	2250	2260	10				2010	2030	20	
	2298	2322	24				2385	2404	19	
	2540	2550	10				2758	2781	23	
	2930	2951	21						294	
			313							
										171
						An. al.				2/1 / 1/4
Chys. tram.				½		Chysothm				1 1
						Pi ed.				1/1
Am. Al.	1209	1241	32	3/2		J. os.				1

Transect on North edge of mammal grid

ECI

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Permanent on site Sagebrush Date 10/15/74 Size of quadrat

Field Analysts: Kelley - Sinz Sheet No. 1 of 1

Legal description of land T2S R99W Sec 8 ¼ sec SWSE

Transect direction NW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOT. cover	5%	15%	40%	10%	15%	5%	20%	10%	40%	20%
[illegible]	40	30	65	60	50	50	25	30	50	40
[illegible] mat	40	30	10	30	30		5	5	20	10
[illegible] smith	5	10	5	10	5	5	T			10
[illegible] Chrysothamnus	15	5	20			10	55		5	
[illegible]		15								
[illegible] seedling		10			10					
[illegible]			T			5	5		5	
[illegible] aster					15			10		15
[illegible]							5			
[illegible]							5			
draba							T			
mat penstemon								5		25
oxytropus									30	

2.2.6-12

#

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: FV & SLE Project: 83 Date: 11/11/84
Site: Permanent Length of Line: 61m
T: 2S R: 99W Sec.: 26 ¼ Sec.: SENE Transect Direction: NW
General Description of Land:
Vegetation Type: Sagebrush, PERM Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	~~Diam. In.~~	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Artr	80	90	1520-1555	10			80	140	60	12, 5, 25, 2
	155	185	2305-2355	30			340	360	20	11, 19, 26, 15, 3
	230	275	2370-2410	45			480	490	10	21, 24, 11, 19, 14 }
	295	340	2670-2676	45			520	580	60	76
	839	910	2850-2855	21			610	660	50	Total 312
	901	1010	2925 2940	9			750	775	25	
	13[illegible]	1370		10			985	1070	85	
	1330	1340		10			1160	1215	55	
	1470	1550		30			1353	1410	57	
				25			1516	1580	64	
				45			2140	2205	65	
				20			2610	2660	50	
				6			2720	2950	230	
				10			2880	2920	40	
				15			2950	2980	30	
Arol	2660	2705	45	331						1, 1, 8, 3, -
				901						2, 1, 2, 6, - 6
				1232					901	2, 5, 2, 5, 2
										10 }
Symp										1, 1, 3 - } +2
										3, 2, 1, 1
										3, 2, 1 } 11
										2, 3
Chrya	275	295	20							1, 6, } 22
	1730	1735	5				2435	2450	15	2, 1, 3, 6, 3
	1890	1920	30				2555	2610	55	3, 1, 3, 6, 4 } 26
			55				2920	2940	20	5/4. 4
									90	
pinion										1
Putr Pursh									4-	1

ECI

2.2.8 4/2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 93 Site ______ Date 10/11/74 Size of quadrat ______

Field Analysts: [illegible] Sheet No. ______ of ______

Legal description of land [illegible] T. 2 R [illegible] 519, SE1/4 [illegible]
PERMANENT

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	20	25	20	15	15	20	25	25	40	25
[illegible]	[illegible]	40		40		30	20			10
[illegible]	10									
Poa sp	10	45	75	45	100	55	30	60	70	35
[illegible]	40	10	20	15				10		5
Arte. sp		5								
[illegible] sp			5							
[illegible]						15		30	30	50
M.										

ecology consultants, Inc.

2.2.8-14

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Miller - Ellis Project: 83 Date: 10/10/74
Site: Permanent Length of Line: 50m
T: [illegible] R: [illegible] Sec.: 7 ¼ Sec.: NE SW Transect Direction: 340°
General Description of Land: Gentle sloping hillside
Vegetation Type: Sagebrush Condition of Foliage:
Aspect 340° Slope 7%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	~~Basal Area Sq. Ft.~~ number	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
rtr	170 580 705 990 1240 1460 1560 1945 2170 2450 2620 2720 2960	240 630 770 1016 1350 1500 1710 1980 2245 2460 2650 2770 2975	70 50 65 26 110 40 150 35 75 10 30 50 15 726		63 84 147 146 293		60 220 340 535 1750 1920 2530 2815	70 280 370 590 1780 1960 2610 2860	10 60 30 55 30 40 80 45 350	85 61
	0 2700 2940	0 2770 2970	70 30 100		6 19		0 1970	0 2020	50	0 8
imp	340 2030	360 2060	20 30 50		6 6					11 5
yso					12 10		850 0	890 0	40	22 24
d										2 2
r										2 2

726
350
1076

2.2.8—15

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Permanent Sagebrush Date 10/10/74 Size of quadrat

Field Analysts: Keller, - Ellis Sheet No. 1 of 1

Legal description of land T2S R99W sec 7 ¼sec NESW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	15	15	20	10	15	15	10	20	5	15
Poa	70	50	20	50	70	50	70	50	50	50
Mat penstemon	10				T			25		
Koelria cristata	10				10		T			10
Lupinus	10		80	50	10	50		25	50	20
Astragalus sp		50								
Hedysarum sp					10					20
Sphaeralcea							30			

ECI

ecology consultants, Inc.

2.2.8-16

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Random sage

Field Analyst: Ellis - Ellinwood Project: 83 Date: 10-14-74

Site: [illegible] Length of Line: [illegible]

T: 5S R: 99W Sec.: 21 ¼ Sec.: Transect Direction: [illegible]

General Description of Land: [illegible] Slope [illegible]

Vegetation Type: Sage Condition of Foliage:

Aspect 100° Class 5%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Pursia	310	380	70	Pursia I-1 II-1 I-[illegible] II-[illegible]
						artr	[illegible]5	350	5	artr I-31
							390	430	40	II-61
							1040	1075	35	I-52
							1115	1180	65	II-26
							1224	1285	60	
							1400	1470	70	
							1655	1675	20	Pinion -I-1
							1840	1900	60	II-2
							2370	2385	15	
							2640	2670	30	I-0
							2920	[illegible]	25	II-2
									425	
							0	125	125	
							435	[illegible]	25	
							865	875	10	
							[illegible]	970	10	Juniper -I-2
							985	1010	25	II-2
							[illegible]	[illegible]	35	
							1760	[illegible]	32	I-2
							2079	[illegible]	12	II-2
									274	
						Juniper	120	195	75	
							—	—		Chry. Visc. - 5 I-1 II-6
						Pinion	—	—		
						Chry. Visid.	2310	2330	20	

ECI

41 ~ 7 44.6 ~ 3 mi. from Powder wash - on road 2.2.0 - 71

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site ______ Date 10/14/74 Size of quadrat ______

Field Analysts: Ellis Ellsworth Sheet No. ______ of ______

al description of land Sagebrush - random T 15 99W S 31 E SW

T.D 2850 A. 100° S. 5% (via drive site ... road)

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
T. Cover	10	90	6	3	5	15	10	10	20	10
Stipa comata	50	90			70	60			10	95
Poa sp.	30		5							
Festuca sp.	20									
Ag. smithii	T		95	50	30					
Muhlenbergia sp.		5		50		5	[illegible]	30	6	
Arenaria sp		5			50	30			75	
Brom tect.		T								
Oryzopsis hymenoides						5	100	30	10	5
Gilia sp.						T				
Haplopappus spin.								40		

ECI

ecology consultants, Inc.

2.2.8.-18

Random - Sage

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Ellenwood Project: 83 Date: 10-12-74
Site: Random Length of Line: 600 ft.
T: [illegible] R: 99W Sec.: 1 ¼ Sec.: SE¼ SE¼ Transect Direction: 115°
General Description of Land: Aspect 165° Slope 2%
Vegetation Type: Sage Condition of Foliage: Dormant - Medium

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Att. Tri	160	235	75	Att. tri I-134
							390	440	50	II-128
							460	540	80	
							610	665	55	I-124
							740	770	30	II-141
							900	910	10	Chrys. Nau. I-0
							935	1000	65	II-0
							1090	1110	20	I-3
						Sage.	1200	1300	100	II-1
						525-595	1310	1350	40	
							1420	1500	80	
				I_2-I_1 = 70			1560	1640	60	Save. I-0
							1660	1710	50	II-0
						art.	1795	1895	105	I-9
						1900-1970	[illegible]	1970	50	II-1
						2040-2065	2050	2200	150	
						2135-2090	2230	2290	60	
						2310-2410	2350	2465	115	
						2460-2505	2530	2550	20	
						2540-2650	2630	2655	25	
						2700-3000	2770	2920	150	
							2950	2970	20	
							070	220	150	70 25
							245	260	15	45
							280	300	20	200 45
							330	385	55	110
							390	405	15	300
							435	595	160	
							655	750	95	3240
							895	955	60	
							985	1015	30	
							1100	1160	60	
							1200	1205	5	
							1225	1340	115	
							1410	1445	35	
							[illegible]	1500	20	
							1520	1595	75	
							1720	1810	90	
							1922	1966	35	

ECI

2.2.6

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project______ Site______ Date______ Size of quadrat______

Field Analysts: SCB - SK Sheet No.______ of ______

General description of land Sagebrush

Stolen Ex Gulch T.D. 100° Aspect 165° Sl. 1-2%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	0	0	0	0	2	0	0	0	0	2
Chenopodium album					1/0					1/0

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Elmwood Project: 83 Date: 10-14-74
Site: North of Tract C-a [illegible] Length of Line:
T: 13 R: 99W Sec.: 21? ¼ Sec.: NW¼NW¼ Transect Direction:
General Description of Land: Mostly sage brush - Aspect to North - Slope 20%
Vegetation Type: Sage- Mt. Brush Condition of Foliage:
SAGEBRUSH

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Arte	0	065	65	Artr I - 58
							175	195	20	II - 40
							220	225	5	
							215	265	50	I - 33
							695	750	55	II - 31
							845	985	40	
							1170	1230	60	Symph - I0 II-
							1855	2000	45	I-6 II-9
							2020	2070	40	Amyl. - I - 8
							2655	2670	15	
							2870	2920	50	II - 14
							150	170	20	I - 23
							545	580	35	II - 34
							860	690	30	
							1590	1650	80	
									610	
						Symph.	2980	3000	20	Bitterbrush I - 2 Pursha II - 0
										I - ~~8~~2 II - 0
						Chry. Vis.	1395	1415	20	
							1570	1610	40	Chrys. Visid. I-
							2320	2560	40	II - 21
							2613	2635	20	
									120	I - 9 II - 12
						Amyl	225	210	85	
							2190	2210	20	Juniper - I - 1
									105	II - 0
						Pinion	190	290	100	
							710	840	130	I-0
							890	1110	220	II-0
							1430	1870	40	
							1940	2100	160	
							2230	2330	100	Pinion I - 1
							2430	2460	30	II - 0
							2750	2670	90	I - 0
							2915	2980	65	II - 0
									935	

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 93 Site ______ Date 14 Oct. 74 Size of quadrat ______

Field Analysts: Ellis Ellinwood Sheet No. ______ of ______

eral description of land Sagebrush - [illegible]

T.D 45° A 340° Slope 60%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
total Cover	10	20	10	15	25	5	10	25	5	25
Poa [illegible]	40	10				30				
Koeleria cristata	90		90	30	40	50		15	10	
Lomatium sp.	10	5	5				5	20		
Viola sp.	10									
Agropyron spicatum	10									
Erigeron pumilus		5							10	
Arenaria sp. (Short [illegible])		80								
[illegible] sp.			5							
Oryzopsis hymenoides				60						
Lithospermum				5						
Senecio sp.				5						
Stipa [illegible]					10	5				20
[illegible] sp.						15				20
[illegible]							15			
Poa sp.							80	15	50	60
Balsamorhiza sag.								50		

ECI

ecology consultants, inc.

2.2.8-II

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

& Random

Field Analyst: [illegible] SE Project: 83 Date: 10-12-74
Site: Random Length of Line:
T: 1S R: 92W Sec.: 30 ¼ Sec.: NW¼ SW¼ Transect Direction: 100°
General Description of Land: [illegible] 145° - Slope >1% - flat
Vegetation Type: Sagebrush - [illegible] Condition of Foliage:

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
CHRY.			10			Art	40	80	40	Art I-82
			30				[illegible]	[illegible]	80	II-~~35~~ 29
			40			2770-2850	[illegible]	[illegible]	> 80	I-113
			30						65	II-95
			30				5[illegible]	[illegible]	30	
			110				1065	1110	45	
			15							Chrys lanc.
			90				1250	1390	140	I-36
			25				2785	2830	45	II-36
			70							
			10				2970	2990	20	I-39
			20							
			10				220	280	60	II-35
			80				[illegible]	[illegible]	55	
			30				530	570	40	
			10				780	[illegible]	20	
			50				855	880	25	[illegible]
			130				1330	[illegible]	100	I-21
			40							
			45				[illegible]	[illegible]	40	II-32
			15				1530	[illegible]	20	I-23
			80				[illegible]	1435	15	
			55				2230	[illegible]	30	I-26
			60				[illegible]	[illegible]	50	
			25						930	
			90			Chrys. vicd	30	120		
			25		1810-1820	0-15	[illegible]	295		
			30		2160-2210	60-120	575	600		
			40		2540-2580	170-195	[illegible]	[illegible]		
			10		2640-2670	780-820	1520	1585	-	
			1305		2710-2740	890-900	[illegible]	[illegible]	-	
					2[illegible]-2950	970-990	[illegible]	765	-	
						1210 1220	[illegible]	2100	-	
						1230 1240	[illegible]	[illegible]	-	
						1430 1460				
						1470 1480	[illegible]	2670		
						1600 1630	2730	2750		
						1690 1700	[illegible]	2850		
						Chrys. nau.	[illegible]	320	70	
						2295-2330	530	560	30	
						2610-2630	[illegible]	[illegible]	20	
							1120	[illegible]	80	
							[illegible]	[illegible]	20	
							[illegible]	[illegible]	25	
							[illegible]	[illegible]	45	
									30	
									20	
							185	240	20	
							[illegible]	[illegible]	40	
							[illegible]	[illegible]	20	
									10	
							[illegible]	[illegible]	35	
							650	670	20	
							1150	1192	485	
							1610	1630		
							2250	2310		

ECI

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site ______ Date ______ Size of quadrat ______

Field Analysts: ______ Sheet No. ______ of ______

[illegible]al description of land Sagebrush-grassland mixture ([illegible])

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	5	5	25	10	3	3	3	2	2	1
Ag smithii	100	0.5	90		100					
Aster sp		5								
Elymus cinereus			20			10	50			
Lepidium sp.				100		40	50	100	20	
Sitanion hystrix						50			80	100

ecology consultants, inc.

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Ellmwood Project: 9.3. Date: 10-14-74
Site: Random Length of Line:
T: 1S R: 99W Sec.: 13 ¼ Sec.: SWSW Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: Sagebrush Condition of Foliage:
Aspect 55° Slope 3°

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
						[illegible]	0	80	80	[illegible] I - 76 II - 65
							150	180	30	
							270	290	20	
							305	362	57	I-52, II - 74
							460	465	5	
							1070	1072	2	
							1110	1140	30	
							1330	1360	30	
							1475	1504	29	
							1515	1570	55	
							1712	1723	11	
							1925	1995	70	
							2105	2132	27	
							2173	2178	5	
							2560	2600	40	
							2623	[illegible]	1	
							2845	2859	14	
							2880	2910	30	
							162	231	69	
							1255	1310	55	
							1748	1784	36	
							2170	2210	40	
							2386	2400	14	
							2640	2685	45	
							2912	2960	48	
							2979	2990	11	
									854	

ECI

ecology consultants

2.2.8 – 25

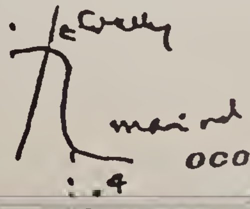
QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site ________ Date 10/14/74 Size of quadrat ________
Field Analysts: Ellis / Ellinwood Sheet No. ______ of ______
ral description of land Sagebrush – Random
T.P. 2950 A 55° |-3% T. 1S R 99W S13 SW SW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	20	70	25	20	70	15	15	10	30	20
Ag. ~~[illegible]~~ smithii	30	20	30	10	10	~~89~~5	30	50		20
Festuca sp. (cont) Muhlenbergia sp (seed forms)	50	70	40	30			20	50	15	
Poa sp.	10									
Bouteloua sp.	10		30	~~30~~	30		5 ~~30~~		5	
Stipa comata		10		40	10				80	80
Koeleria cristata					50	5				

Oryzopsis hymenoides
Bromus tectorum

.4 mi up side rd. to where enter juniper – pinyon



ECI
ocology consultants, Inc.

2.I.8-Z6

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley, Sanz Project: 83 Date: 10-16-74
Site: [illegible] Length of Line: 300'
T: 25 R: 99 w Sec.: 3 ¼ Sec.: [illegible] Transect Direction: 41
General Description of Land:
Vegetation Type: [illegible]
Condition of Foliage:
Aspect NE Slope 1% terrain [illegible]

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	occ. ~~Diam. In.~~	Basal Area Sq. Ft.
ar. tr.	85	110	25	87	
	125	135	10	104	
	165	178	13	93	
	331	347	16	121	
	401	410	9		
	435	439	4		
	[illegible]	[illegible]	15		
	[illegible]	[illegible]	16		
	660	683	23		
	701	710	9		
	785	919	134		
	925	1037	32		
	1104	1112	8		
	1258	1311	53		
	1420	1430	10		
	1509	1558	49		
	1671	1692	21		
	1702	1710	8		
	[illegible]	[illegible]	55		
	[illegible]	[illegible]	22		
	[illegible]	[illegible]	16		
	[illegible]	2300	206		
	[illegible]	[illegible]	14		
	[illegible]	[illegible]	59		
	[illegible]	[illegible]	64		
	[illegible]	[illegible]	31		
	[illegible]	[illegible]	25		
	[illegible]	[illegible]	26		
	[illegible]	[illegible]	8		
			1013		
			919		
			1931		
Chap.			2		

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units	
Ar tr	120	140	20	133	91
	190	230	40	103	87
	245	255	10		
	360	430	70		
	470	480	10		
	670	685	15		
	760	850	90		
	870	910	40		
	970	1010	40		
	1030	1120	90		
	1205	1223	18		
	1268	1331	63		
	1345	1455	110		
	1480	1500	20		
	1500	1520	20		
	1609	1670	61		
	1742	1773	31		
	1789	1820	31		
	2222	2233	11		
	2314	2318	4		
	2469	2481	12		
	2553	2640	87		
	2658	2672	14		
	2789	3000	11		
			918		
Sarcobatus	1455	1478	23	1	4
				4	1

ECI

2.2.8 – 27

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site mn. sage Date 10-16-74 Size of quadrat

Field Analysts: [illegible] Sage Sheet No. 1 of 1

General description of land [illegible] sage

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOT COVER	1%	20%	1%	1%	0%	0%	0%	1%	T	10%
Descurainia	100									
Oryzopsis hy.		60							100	
Br. tec.		40	100	100				50		90
Ag. Sm								50		10

2.2.8-28

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kellogg [illegible] Project: 93 Date: 10-16-74

Site: [illegible] Length of Line:

T: [illegible] R: [illegible] Sec.: 4 ¼ Sec.: NW ¼ [illegible] Transect Direction: SW

General Description of Land: [illegible] (upper terrace slope)

Vegetation Type: [illegible] Condition of Foliage: [illegible]

Aspect SE Slope [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	occur. ~~Diam.~~ ~~In.~~	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Ar tr	345	370	25	63 49		Ar tr	245	274	29	60 52
	460	485	25				330	333	3	
	575	632	57	38 19			780	801	21	58 60
	780	795	15				820	833	13	
	835	853	18				870	881	11	
	1005	1081	76				1110	1285	175	
	1204	1240	16				1310	1352	42	
	1329	1355	26				1408	1445	37	
	1370	1402	32				1462	1481	19	
	1468	1505	37				1510	1653	143	
	1610	1658	48				1745	1842	97	
	1862	1883	21				1880	1935	55	
	1978	2059	81				2030	2090	60	
	2240	2318	58				2110	2165	55	
	2455	2463	8				2220	2380	160	
	2498	2510	12				2420	2460	40	
			555 1209 1764				2480	2490	10	
							2590	2680	90	
							2765	2780	19	
							2790	2860	70	
							2940	3000	60	
									1209	
ocia lanata	2658	2670	12	6	→	Eurotia lanata	40 189 625 801	53 195 638 820	13 6 13 19 51	10 14 9 12
nyo.	950	960	10	1		Chrys.				1 1
Conf.	510 1170 1402 2093	524 1198 1468 2110	14 28 66 17 125	5 11 23 14	→	At. conf.	2490	2510	30	9 7 8 5
Canes.				1 2 10		At. Canes.				1 1

small shadscale shelf box

cont. edge grad.

2.2.8-29

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project C3 Site Gulch in sage Date 10-16-74 Size of quadrat

Field Analysts: Kelley . Sanz Sheet No. 1 of 1

General description of land sage - rabbitbrush gulch bottom - Box Elder Gulch (upper terrace ...)

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
TOTAL COVER	0%	1%	30%	80%	40%	5%	15%	3%	1%	T
Br. tec.		40	40	90	90	90	20	90	60	
Si hy		60	25	5					40	100
Oryzopsis			35		10	10	80	10		
micrantha				5						

7a*

2.2.8-30

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Keller-Carvalosi Project: 43 Date: 10/14/74
Site: Random Length of Line: [illegible]
T: [illegible] R: [illegible] Sec.: 24 ¼ Sec.: [illegible] Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: Random sampling Condition of Foliage:

MATURE Class 3" plus diam.						Reproductive class 3' high < 3" diam.				
Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Artem	0	69	69		14, 20,		1970	1988	18	3, 21, 6, 5
	80	85	5				2001	2019	18	6, 10, 10, 9 (70)
	135	183	48		10, 11, 10,		2189	2210	21	
	819	822	3		11, 10, 12		2230	2240	10	
	841	865	24		(98)		2245	2257	12	
	1010	1051	40				2326	2371	45	
	1073	1089	16				2960	2965	5	
	1134	1166	32				2955	2971	16	
			237						145	
res	[illegible]	[illegible]	20		2, 2, 3					2, 2, 2, 3, 2, 3,
	[illegible]	1430	10		1, 3, 2, 3		1654	1671	7	17
			30		16					
mal					2, 1, 2, 1		1570	1572	2	1, 1, 3, 3
					4, 2, 2, 1		2260	[illegible]	22	
					2		2210	2230	20	
							2240	2245	5	
							2990	3000	10	
lyn	[illegible]	1371	3		2, 2		~~	~	59	1

ECI

1b

2.2.8-31

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: E3 Date: 10/14/74
Site: Random Length of Line: [illegible]
T: 2S R: 100W Sec.: 24 ¼ Sec.: SW SE Transect Direction: [illegible]
Legal Description of Land: [illegible]
Vegetation Type: Sagebrush Condition of Foliage: Good

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
rtem	35	96	61		14, 15, 14		1698	1729	31	6, 15, 10, 8, 18, 11
	220	230	10		21, 10, 2		1740	1781	41	18
	263	315	52		Tot. 76		[illegible]	[illegible]	41	Tot. 81
	389	450	61				2090	2120	30	
	610	633	23				2440	2503	63	
	740	753	13				2580	2620	40	
	944	960	16				2748	2782	34	
	1395	1410	15						280	
			251							
hrys	373	385	12		6, 7, 3, 2,		1509	1515	6	8, 4, 9, 2, 4, 4, 1
	451	462	11		3		[illegible]	[illegible]	24	12 Tot. 53
	711	719	8		Tot. 35		2162	2171	9	
	942	949	7				[illegible]	[illegible]	13	
	1417	1420	8				[illegible]	[illegible]	4	
			46						56	
imal	462	464	2		1, 2, 3	—	1970	2043	73	3, 1, 3, 2
			59		6		[illegible]	[illegible]	20	Tot. 11
			93						93	
			154							
ignph			—			—	[illegible]	[illegible]	11	5 –
							[illegible]	[illegible]	23	
									34	

1

~~228-31~~
2.2.8-32

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site [illegible] [illegible] Date 10/11 1977 Size of quadrat

Field Analysts: Kelley - Cancalosi Sheet No. 1 of 1

Legal description of land T2S R100W Sec 24 ¼ sec SW SE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
[illegible]	05	25	10	15	30	20	15	10	25	20
[illegible]	[illegible]	50		25	90		20	10	75	05
[illegible]	25			05					15	50
[illegible]	[illegible]									
[illegible]		20	30	50	10	40	20	35		30
[illegible]		20	15	20			30	60	10	05
[illegible]		[illegible]								
[illegible]			5			40				
[illegible]						10				
[illegible]						10				
[illegible]							20	10		10

ECI

ecology consultants, inc.

[illegible] 2.2.6 - 21/22

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: [illegible] Project: 83 Date: 10/14/74
Site: [illegible] Length of Line:
T: R: Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: [illegible] Condition of Foliage: [illegible]
Aspect [illegible] - slope [illegible] ″

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	1st 15 m I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	2nd 15 m I_2-I_1	Number Per 50' Units
artem	160	170	10	I	[illegible] 12 14, 32 93		1500	1510	10	15, 9, 17, 2, 7, 1, 27 II - 87
	559	570	11				1609	1651	42	
	609	621	12				1699	1768	69	
	755	780	25				1854	1876	22	
	799	835	36				1868	1879	11	
	881	938	57				2021	2092	71	
	1172	1193	21				2130	2165	35	
	1240	1251	11				2240	2249	9	
	1460	1500	40				2315	2321	6	
			223 418 641				2335	2350	15	
							2580	2591	11	
							2780	2805	25	
							2811	2853	42	
							2918	2968	50	
									415	
					93 I - 53					II - 93
rys	780	791	11		29, 9, 7, 8		1663	1698	35	10, 14, 12, 3, 3, 2, 6, 2
	858	872	14				1842	1861	19	
	1332	1342	10				1982	1993	11	
	1354	1371	17				2092	2114	22	
			52 146 198 191 389				2351	2369	18	
							2394	2405	11	
							2505	2522	17	
							2728	2741	13	
									146	II - 3
mal					I - 5 4, 1					1, 1, 1,
					I - 20					II - 13
mph	1145	1161	16 19 35 108 142		5, 8, 3, 4		2115	2131	19	3, 2, 3, 3, 2

ECI

ecology consultants,

5B

2.2.E.2.0 3L.1

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Keller-Cavcalosi Project: 83 Date: 10/14/74
Site: Random Length of Line: 3000 20 m
T: 25 R: 10 W Sec.: 27 ¼ Sec.: SE NW Transect Direction: NNE
General Description of Land:
Vegetation Type: Sagebrush Condition of Foliage: good

MATURE Class 3" plus diam.						Reproductive class 3' high < 3" diam.				
Species	15 I_1	I_2	15 I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
artem 1251-1292 1371-1390 1[illegible]-1500	0 138 175 231 321 398 554 710 810 [illegible] 875 916 [illegible] [illegible] [illegible]	25 150 190 292 378 415 612 780 838 [illegible] 888 937 [illegible] [illegible] [illegible]	25 12 15 61 57 17 58 70 28 28 13 21 11 24 31	1014 641 1655	16, 21, 14 17, 22, 19 27. Tot. 136		1500 1552 1571 1642 1706 2019 2055 2244 2344 2401 2519 2600 [illegible] 2929 2972 [illegible] [illegible]	1505 1557 1581 1691 1722 2042 2110 2296 2384 2445 2547 2605 2712 2945 2993 [illegible] [illegible]	5 5 10 49 16 23 55 52 40 44 28 5 26 16 21 23 44 472	2, 18, 17, 23, 14 7, 8, 7 Tot. 115
Chry	[illegible] 615 1255 1250	[illegible] 715 1350 1251	71 → Tot. 3 95 3 11 117 79 191 Tot.	542 472 1017 Tot	6, 9, 3, 3 5, 12, 12 Tot. 50	Chry	1[illegible] 1852 1965 2560 2990	1753 1871 1982 2581 3000	12 19 17 21 10 79	9, 5, 3, 4, 5, 4, 4 4, 3 Tot 41
Sym					2, 4, 4 2, 2 Tot 14	Symp.	2240 2335 2467 2742 2790 2859	2244 2345 2475 2780 2824 2867	4 5 8 39 34 18 Tot 108	9, 8, 14, 12, 2, 3 2 Tot 55
Tetradymia	1924	1931	7		1, 1, 2 Tot 4		1957	1963	16	1, 1, 1 3 Tot
							1692	1705	6	1, 1 Tot 2

ECI
ecology consultants

2.2.8 — 31
2.2.8 — 35

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Random sagebrush Date 10/14/74 Size of quadrat
Field Analysts: Keller - Cavalcalosi Sheet No. 1 of 1
General description of land T2S R100W Sec 27 [illegible] SE [illegible]

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total	35	30	40	40	30	35	25	20	35	50
Poa	60	30	05	15	15	10	20	20	20	20
Festuca	35	60	60	25	35	40	30	10	20	10
Mat [illegible]	05	05			15					10
Artemisia		05		30		20		30		10
[illegible]			10	10	10	20	25			
[illegible]			25	20	20	10	10	20	10	10
[illegible]					05					
[illegible]							15	10		
[illegible]								t		10
[illegible]									20	[illegible]
[illegible]									10	
[illegible]										t

2.2.8 — 36

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

ield Analyst: [illegible] Project: 53 Date: 10/13/74
Site: Random on site Length of Line: 30 m
T. 20S R: [illegible]W Sec.: 4 ¼ Sec.: NW SE Transect Direction: [illegible]
eral Description of Land: [illegible]
Vegetation Type: [illegible] Condition of Foliage: Good
[illegible] 5W [illegible] (47)

MATURE Class ~~3" plus di~~am. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	No./unit ~~Diam.~~ ~~In.~~	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
art. tri	20	30	10	49		ar tr	0	40	40	52
	227	260	33	58			72	81	9	73
	434	465	31	34			135	233	98	
	514	545	31	38			287	362	75	
	749	797	48				422	431	9	66
	820	855	35				450	455	5	54
	947	953	6	~~52~~			475	594	119	
	1317	1370	52	~~73~~			675	691	16	
	1162	[illegible]	16				720	790	70	
	1379	1418	39				879	911	32	
	1598	1628	30				940	958	18	
	1645	[illegible]	35				1041	1068	27	
	1749	[illegible]	17				1088	1132	44	
	2215	2302	87				1191	1308	117	
	2544	2563	19				1459	1495	36	
	2738	2746	8				1690	1704	14	
	2876	2924	48				1730	1805	75	
	2936	3000	64				1889	1911	21	
							1930	1983	53	
							1994	2011	17	
							2170	2193	23	
							2251	2273	22	
							2284	2296	12	
							2561	2573	12	
							2580	2592	12	
							2632	2669	37	
							2730	2739	9	
							2806	2851	45	
									1,067 — incorrect	
									1676 — correct	
						J. os.				2

ECI

2.2.8 = 31

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 23 Site Sagebrush Date 10/13/74 Size of quadrat ______
Field Analysts: Kelley Sanz Sheet No. 1 of 1
al description of land T2S R98W Sec 4 [illegible] NW SE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	10
~~[illegible]~~ tot. cover	15%	25%	15%	15%	10%	5%	10%	5%	25%	10%
Ag. Spicatum	40%									
Festuca sp.	60%	10		20			5			
Opuntia		60	10	20						10
Erigeron sp.		10		T						
Poa		10		T				5	5	
Carex		5	T	20	80			5	10	60
[illegible] lichen		5								
Ag. Smithii			80	20	20		5	90	50	10
Gilia			10							
Gutierrezia				20		100			25	
Br. tect.							90			
[illegible]									5	5
Stipa sp.									5	
Mat penstemon										15

ECI
ecology consultants, inc.

2.2.8 – 38

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Kelley Project: 83 Date: 10/18/74
Site: [illegible] Length of Line: 60 m
[illegible] R: [illegible] Sec.: 10 ¼ Sec.: NW NW Transect Direction: NW
General Description of Land: Ridge top
Vegetation Type: Sagebrush Condition of Foliage: Good
Aspect NW Slope 2% , 300 yards [illegible]
[illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Artr	810 958 1332 1603 1801 1976 2602 2720	908 1002 1361 1622 1818 2032 2641 2740	98 44 29 19 17 56 39 20 322 264 588		35,32,31 44,41		0 81 235 950 1145 1201 1354 1460 1512 1930 2128 2188 2227 2360 2718 2830	41 110 258 1010 1152 1220 1380 1498 1610 1993 2172 2203 2233 2372 2792 2841	41 29 23 60 7 19 26 38 98 63 44 15 6 12 74 11 566	90 77
[illegible]	220	245	25		2,1 0					1 2,3
[illegible]	0 1947	0 1972	25		0 5,1					2 1
[illegible]	0 2440	0 2480	40		0 3,2		2301	2342	41	4 3
[illegible]	1030	1041	11 24 35		4,3 2,3		41 2579	53 2591	12 12 24	5 3,3

2.2.8 - 39

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project E3 Site Random [illegible] Date 13 [illegible] Size of quadrat

Field Analysts: Kelley Sheet No. 1 of 1

General description of land T25 R99W Sec 10 [illegible]
between drill [illegible] SE corner of tract

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	15	5	20	10	10	T	5	5	20	5
Festuca	20	30	50				15		30	
Antr	35	10	5	5	10	100	10	75	10	25
Erigeron	15		T		5		5	15		5
Juniper	25		15					10		
Arenaria	5	T	T							
Koehleria cristata		60	5	20			40			5
Prickly mat			20	15			20		40	
Cryptantha			5							
Hedysarum				40						
Guti				10						T
Carex				5			5		10	
[illegible]				5			5		10	
Penstemon strictus					25					
mat penstemon					10					
Sphaeralcea					T		T	T		5

ECI
ecology consultants, Inc.

228-40

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Killeen Project: F3 Date: 10/18/80
Site: [illegible] on site Length of Line: 30 m
T: 25 R: 93W Sec.: 5 ¼ Sec.: SW SE Transect Direction: NW
eral Description of Land: [illegible] from road to bench [illegible] side of [illegible]
Vegetation Type: Sagebrush Condition of Foliage: Good
[illegible] slope 15%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2-}I_1$	Number Per 50' Units
Artr	41 332 763 852 1159 0	83 371 791 933 1163	42 39 28 81 5 195		43 36 79 total		219 720 1190 1370 1710 1819 2070 2150 2350 2620	231 750 1210 1410 1750 1832 2107 2172 2385 2710	12 30 20 40 40 13 37 22 35 90 339 195 534	6,2,17 - 25 23,30 53 78
itr							0 2010 2455	0 2038 2485	28 30 58	3,4,2 1
d					.1 2					1 2
mal					3 5		0 2810	0 2950	40	5,3,3,1 2,8
mp							0 2720 2950	0 2723 2971	3 21 24	0 1,3
M	0 1550 1951 2890	0 1560 1972 2902	10 21 12 43		4 8		830 2740	839 2751	9	4,3 5
Ni					1 1					2 1

ECI

2.2.8-41

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Random Sage Date 10/18/76 Size of quadrat

Field Analysts: Kelley Sheet No. 1 of 1

al description of land T2S R97W Sec 5 ¼ sec SWSE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	10	20	10	5	20	25	30	40	40	20
Koehleria cr	20	25	50	100	40	40	50	10	20	5
Poa secunda?	20	10			10	10	5	60	40	5
Haco	45		20							
Andr	15	10			10	15	5	5	10	10
[illegible]		15								
Carex		10			5		10	10	5	10
Erigeron		15	T				5	5	15	60
Penstemon arida		15			5					
Arenaria			T		5		5	5	5	
[illegible]			5				5			
Eriogonum			T			15				
Festuca			25		20	15	10	5	5	
mat penstemon						5				
Astrag sp.							5			
sphaeralcea									T	
Guti										10

X

ECI
ecology consultants, Inc.

X

2.2.8-42

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis-Baker Project: 93 Date: 17 OCT. 74

Site: [illegible] on site Length of Line:

T: R: [illegible] Sec.: [illegible] ¼ Sec.: SW-NE Transect Direction: [illegible]

General Description of Land: [illegible]

Vegetation Type: Sagebrush Condition of Foliage:

[illegible] 3.5 [illegible] 5%

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.
	800	890	90		
	[illegible]	[illegible]	70		
			25		
	1340	1400	60		
	1360	1510	150		
	1770	1780	10		
	[illegible]	[illegible]	40		
	1990	2080	90		
	2090	2380	290		
	2430	[illegible]	50		
	2500	2555	55		
	2580	2600	20		
	2650	2690	40		
	2795	[illegible]	20		
	[illegible]	[illegible]	15		
			1025		

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Artemisia tridentata	0	25	25	
	40	60	20	I_1 250
	[illegible]	[illegible]	10	II_1 209
	360	440	80	I_2 230
	450	560	110	II_2 143
	670	700	30	
	730	760	30	
	[illegible]	[illegible]	20	
	[illegible]	[illegible]	50	
	[illegible]	[illegible]	30	
	1175	[illegible]	60	
	1260	1270	10	
	[illegible]	[illegible]	110	
	1530	1570	40	
	[illegible]	[illegible]	250	
	[illegible]	[illegible]	80	
	[illegible]	[illegible]	10	
	[illegible]	2180	100	
	2220	[illegible]	60	
	[illegible]	[illegible]	90	
	[illegible]	[illegible]	15	
	[illegible]	[illegible]	270	
	[illegible]	[illegible]	30	
	0	65	65	
	170	190	20	
	[illegible]	[illegible]	20	
	[illegible]	[illegible]	25	
	[illegible]	510	100	
Eurotia	[illegible]	[illegible]	45	
			1805 1025 2830	I_1 [illegible] II_2 2 I_2 14
Chrys. nau. [illegible]	[illegible]	[illegible]	35	I_1 12
	2305	[illegible]	20	II_1 14
	[illegible]	[illegible]	15	I_2 27
	385	395	10	II_2 25
	[illegible]	[illegible]	10	
	[illegible]	[illegible]	70	
	740	765	25	
	[illegible]	[illegible]	45	
	[illegible]	[illegible]	20	
	[illegible]	[illegible]	40	
[illegible] Confer	[illegible]	[illegible]	290	[illegible] 7

[illegible] [illegible]
2920 300

15
20
30
55

2.2.8-43

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site [illegible] Date 17 Oct 74 Size of quadrat

Field Analysts: Billie Baker Sheet No. 1 of 1

General description of land Sagebrush T1S R97W Sec 33 [illegible] SWNE

TD:80 A-55' S 5%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
total cover	0	0	2	70	5	0	1	20	0	1
Gutierrezia sarothrae			100				100			
Artr (seedlings)				100				100		
Erna (seedling)					100					
[illegible]										100

many seedling sage filling in interspaces in stand

ecology consultants, inc.

2.2.8-44

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: ELLIS - BAKER Project: 83 Date: 10/17/74
Site: Random on [illegible] Length of Line: [illegible]
T: - R: [illegible] Sec.: [illegible] ¼ Sec.: [illegible] Transect Direction: [illegible]
General Description of Land: [illegible]
Vegetation Type: SAGEBRUSH Condition of Foliage:
[illegible] 17%

MATURE Class 3" plus diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	~~Basal Area Sq. Ft.~~
rotia	2570	2595	25		II_2 6

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Artemisia tridentata	140	[illegible]	60	I_1 127
	410	[illegible]	90	II_1 150
	540	[illegible]	30	I_2 179
	590	[illegible]	30	II_2 119
	[illegible]	[illegible]	40	
	1040	[illegible]	100	
	1370	[illegible]	30	
	[illegible]	[illegible]	45	
	1730	[illegible]	10	
	[illegible]	[illegible]	50	
	1940	2170	230	
	2320	2420	100	
	2790	2830	40	
	[illegible]	[illegible]	140	
	[illegible]	[illegible]	110	
	0	30	30	
	60	200	140	
	480	710	230	
	770	810	40	
	840	1060	220	
	1125	[illegible]	105	
	1280	[illegible]	50	
	[illegible]	[illegible]	100	
	[illegible]	[illegible]	20	
	[illegible]	[illegible]	55	
	[illegible]	[illegible]	180	
	[illegible]	[illegible]	114	
	[illegible]	[illegible]	35	
	2460	[illegible]	245	
	[illegible]	[illegible]	30	
	[illegible]	[illegible]		
			2715	I_1 4
C. nanus	[illegible]	[illegible]	$- II_2$	II_1 1
			85	I_2 3
				II_2 4
Eurotia	1225	1290	65	I_1 [illegible]
	1350	1360	10	II_1 [illegible]
	1610	1620	10	I_2 23
	2570	2595	25	II_2 6
			110	
Symphoricarpos				II_1 1 I_2 2
C. viscid.				I_2 1

ECI

ecology consultants, i

2.2.8 — 45

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project________ Site RAVEN Date 10/17/74 Size of quadrat________

Field Analysts: ELLIS - BAKER Sheet No.______ of ______

Legal description of land Sagebrush T 1S R 99W S. 32 SWNE

TD. 190 A 180° Strike 100

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	2	3	3	10	1	0	7	3	0	5
Ar tridn	100	100	100	100	100		80	10		20
El. cinereus							20			
Sitanion hystrix								90		
Gutierrezia sarothrae										80

X

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: ELLIS BAKER Project: 83 Date: 10/11/74
Site: RANDOM on site Length of Line: 60 M'
T: [illegible] R: [illegible] Sec.: [illegible] ¼ Sec.: NESE Transect Direction: [illegible]
General Description of Land:
Vegetation Type: SALTBRUSH Condition of Foliage:
[illegible] Slope [illegible] 20%

~~MATURE Class 3" plus diam.~~

Species	I_1	I_2	I_2-I_1	Diam. In.	~~Basal Area Sq. Ft.~~
lvia lanata	2215	2245	30		II_2 6
	2570	2580	110		
	2715	2755	45		
			185		
etradymia					II_2 39
inus edulis					I_2 2
Symph					II_2 2

Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Number Per 50' Units
[illegible]	0	40	40	I_1 89
	290	300	10	II_1 57
	320	345	25	I_2 87
	[illegible]	[illegible]	25	II_2 7
	710	[illegible]	25	
	1130	[illegible]	50	
? —	[illegible]	[illegible]	30	
	[illegible]	[illegible]	75	
	1720	1775	55	
	1930	2040	110	
	[illegible]	[illegible]	80	
	0	5	6	
	250	270	20	
	405	480	75	
	570	615	45	
	790	760	70	
	[illegible]	[illegible]	30	
	[illegible]	[illegible]	40	
	1420	[illegible]	40	
			851	
[illegible] center:	130	200	70	I_1 19
	[illegible]	[illegible]	25	II_1 41
	[illegible]	[illegible]	40	I_2 26
	[illegible] 20	[illegible]	80	II_2 5
	[illegible]	[illegible]	50	
	[illegible]	[illegible]	65	
	[illegible]	[illegible]	30	
	90	140	50	
	250	260	10	
	[illegible]	[illegible]	20	
	2180	2110	30	
	2250	[illegible]	60	
			530	
[illegible]	[illegible]	[illegible]	20	I_1 4
	2715	[illegible]	15	I_2 3
	[illegible]	2930	10	II_2 30
			45	
[illegible]	-	-	-	I_1 1
				II_1 2

ECI
ecology consultants, In

2.2.8-47

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project______ Site Rawlins Date Oct. 17 74 Size of quadrat______
Field Analysts: Ellis Baker Sheet No.______ of ______
Legal description of land sagebrush
T.D. 70° A. 5° 1st 30. 5% 2nd 30, 5-25%. T 15, R 90W, S33 NE

	Quadrat Number									
Species	1	2	3	4	5	6	7	8	9	0
Trial mix	2	3	4	2	0	0	0	3	1	5
Ag. trachy	100	30	100	40				100	T	
Poa sp.		70								
S. hystrix				50						
O. hymenoides									100	80
Chrysothamnus sp.										20

11

X 2.2.8-10

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Ellmwood Project: 83 Date: 10-15-74
Site: Rail[illegible] Length of Line: [illegible]
T: 15 R: [illegible] Sec.: 30 ¼ Sec.: NW¼ NE¼ Transect Direction: [illegible]
[illegible]ral Description of Land: [illegible] - [illegible] 3 - 5%
Vegetation Type: Sagebrush [illegible] Condition of Foliage: [illegible] - [illegible]

MATURE Class 3" plus diam.						Reproductive class 3' high < 3" diam.				
Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2-}I_1$	Number Per 50' Units
						Art.	240	345	105	Art I-26
						1455-1475	1170	1210	40	II-11
						1620-1645	[illegible]	[illegible]	20	I-30, II-27
						22[illegible]-2310	[illegible]	1410	30	
							1530	[illegible]	30	Osco. I-0
							1500	1520	60	Juniper II-1
									15	
									20	I-0
							225	240	5	II 0
							210	330	50	
							925	920	45	Sev. I-4
							955	1005	35	
									30	
						Sev.			475	I-1
						Atca.	690	705	15	I-0 II-1
						Tetra can.	70	80	10	[illegible] I-3 II-14 I 6 II 0
										Chrysothamnus I-1 II-0
						Chrys. Vis.	400 260 1455	450 300 1480	50 40 15 105	I-17 II-5 Chrys. I-14 II-7
										I-9 II-4

2.2.8 - 47

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project________ Site________ Date________ Size of quadrat________

Field Analysts:________ Sheet No._____ of _____

General description of land Sagelands

NE part [illegible] 3-5%

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
	10	2	20		15	15	2	3	5	5
Arenaria sp.	35		20	~				100	40	
Eriogonum sp. (gray [illegible])	35		20		20	20				
Haplopappus spp. ([illegible])	30					10		10	10	90
Bromus tectorum		50								
Poa sp.		50								
A. tridentata			10		20			10		10
Gutierrezia sarothrae					60				5	
Oryzopsis hymenoides						40	100	20	40	
[illegible] sp.						T				
Stipa comata									6	

Western sandstone soil.

ecology consultants, inc.

Shadscale (2.2.9)

2.2.9-1

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: SCE - SE Project: [illegible] Date: 10/12/74
Site: Permanent Length of Line:
5 R: 99W Sec.: 25 ¼ Sec.: NE¼ SW¼ Transect Direction: 140°
General Description of Land: Steep - Sand stone Talus - shale Aspect 150° Slope 15-
Vegetation Type: ~~[illegible]~~ Stratified pinon Condition of Foliage: Dormant - [illegible]

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
Ju ost.				45cm		Artr	700	840	40	Artr I-11 II-0 I-0 II-0
						Tet. ca.				Tet. Ca. I-0 II-0 I-1 II-0
						Ar conf. Chalisalle	450 500 600	490 540 620	30 40 30 100	Ar Conf. I-19 II-1 I 0 II-0
edulis				42cm		Pied				Pied. I-0 II-1 I-0 II-0
						Chry nau.	8520	8540	20	Chry nau. I-0, II-20 I-2 II-3
						Gut. fr.				Gut. fr. I-12 II-1 I-0 II-0
						Rhutriblata Rush.				Rhutr I-1 II-0 I-0 II-0.

ECI

2.2.9.-2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project Q3 Site ______ Date 10/12/74 Size of quadrat ______

Field Analysts: SCR FSR Sheet No. 1 of 1

al description of land Shadscale T1S R99W Sec 25 ¼ Sec NE¼
(T.D. 190°) Aspect 150°/ Slope 15-20 %.

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
total Cover	10	0	5	1	0	1	10	10	10	5
Bromus tect	100									
Oryzopsis hymen.			100				100			.25
Eriogonum (long gray leaves, [illegible])				100		100		20	15	
Leptodactylon								50	5	[illegible]
Hymenopappus fil.								30	75	
Cryptantha								T		5
Penstemon sp										5
									5	

2.2.9-3

Permanent - Shadscale

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis - Ellinwood Project: 83 Date: 10-15-74
Site: Tract-C-a onsite Length of Line:
15 R: 99W Sec.: 34 ¼ Sec.: SW¼NE¼ Transect Direction: 65°
General Description of Land: - Steep slope - dry sparse vegetation - aspect
Vegetation Type: Shadscale Condition of Foliage: Seeding - Stopped

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
Juniper I-0	—	—	—	#50cm		Atr.	240	245	5	confertifolia Atriplex - I-2
							340	400	60	
							730	750	20	II - 7
							1030	1060	30	
							1120	1140	20	I - 22
							1210	1240	30	II - 7
							670	720	50	
							1040	1120	80	Only, I - 0
							1290	1330	40	II - 4
							2990	3000	10	I - 0
									345	II - 0
						Artr	250	390	130	Artemi. Tri. I-2
							1260	1300	40	II - 0
									170	I - 2 II - 0
						Grnd.	1990	2060	70	
										arte frig I - 7
										II - 36
										I - 1 II - 1
						Arte frig	820	830	10	
							935	955	20	
							1080	1100	20	
							1320	1345	25	chrysothamnus.
							1460	1480	20	
							1650	1660	10	I - 62
							1720	1730	10	II - 2
									115	I - 1 II - 0
						Chry. Nas.	1340	1350	65 10	Chrysothamnus Na
						2170-2255	1920	1960	40	I - 1
									140	
							40	180	110	II - 10
							540	650	40	
							1100	1140	445	I - 15 II - 8
						Chry. Visd	570	580	10	Pinion I - 0
							700	715	15	
							900	920	20	
							950	970	20	II - 1
							1170	1195	25	
									90	

ECI

2.2.1-1

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PERMANENT Date 15 OCT 74 Size of quadrat ______

Field Analysts: Ellis - Ellinwood Sheet No. ______ of ______

General description of land shadscale.

T. O. 65° A. 170° S. 15% T. 1S R. 99W S 34 SW NE

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	1	1	1	3	5	0	0	1	1	0
Oryzopsis hymenoides	100	100								
Eriogonum sp. (gray leaves tiny)			100	100	95			100	100	
Cirsium sp.					5					

2.2.9-5

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: B. Ker-Ellis Project: [illegible] Date: 10/17/74
Length of Line:
Site: Random on site
T: [illegible] R: 99 W Sec.: 34 ¼ Sec.: SE · SE Transect Direction: 35°
General Description of Land: Random Shadscale
Vegetation Type: Shadscale Condition of Foliage:
Aspect - 135° Slope - 50%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Atriplex	1840	1860	20	I_1 21
						confer.	1930	1940	10	II_1 21
							2610	2640	30	I_2 40
							540	560	20	II_2 44
							710	735	25	126
							1010	1020	10	
							2150	2180	30	
							2400	2420	20	
									165	
	2680	2700	20			C. nana	550	560	10	I_1 12
	110	120	10				1330	1375	45	II_1 31
	1645	1650	5				1500	[illegible]	35	I_2 13
			435				1575	1590	15	II_2 4
							1690	1720	30	60
							2035	2060	25	
							2080	2310	230	I_1 249
							2250	2260	10	
						C. [illegible]	90	[illegible]	10	[illegible]
							220	[illegible]	15	
							285	300	15	I_2 75
							495	510	15	
							560	580	20	II_2 25
							860	880	20	
							1025	1030	5	207
							1260	1275	15	
							10	30	20	
							65	90	25	
							180	195	15	
	970	1003	10				210	220	20	
	1125	1160	35				385	415	30	
	2030	2070	40				440	500	60	
	2140	2815	675				[illegible]	560	60	
							735	765	30	
			1135			Sarcobatus	2590	[illegible]	II_2	I_2 9
									30	II_2 2
						Artemisia	1560	1600	II_2 10	I_1 9
							2815	2920	35	II_1 5
									45	I_1 17
										I_2 25
										56

ECI

2.2.10-1
2.2.4-6

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site [illegible] Date 17 Oct. 74 Size of quadrat

Field Analysts: ELLIS - BAKER Sheet No. of

General description of land Shadscale 1S 99W S34 SE S

T. D. 35° A' 135 S. 50%

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
[illegible]	0	1	0	0	0	0	0	0	3	0
[illegible]		120								
[illegible]									100	

ECI
ecology consultants, Inc.

Random - Shadscale

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

2.2.9-7

Field Analyst: Ellis - Ellmwood Project: 13 Date: 10-15-74
Site: Duck Creek - South facing slope Length of Line: 60 meters
T: 5 R: 94W Sec.: 12 ¼ Sec.: NW NW Transect Direction: 350
General Description of Land: Barren - Aspect 142 Slope 12%
Vegetation Type: Shadscale Condition of Foliage: Dormant

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	$I_{2}-I_1$	Number Per 50' Units
						Atriplex Confertifolia	595 850 980 535 1400 1660 2450 2520	610 860 1040 605 1410 1675 2470 2560	15 10 60 70 10 15 20 40 240	atriplex - confertifolia I - 36 II - 7 I - 20 II - 5 ~~4~~ 6
						Artemesia Tri.	0 220 432 990	50 230 495 1070	50 10 63 80 203	arter. I - 8 II - 7 I - 20 II - 0
						Tetradema				Tetradimia Horsebrush I - 2 II - 6 I - 0 II - 0
						Arte. frigida	15 100 180 230 2420 2570 2670 2810	30 120 210 260 2530 2585 2685 2820	15 30 30 30 10 15 15 10 155	art. Fri. - I - 153 II - 43 I - 0 II - 0
						Chryso. Visi.	360 1450	375 1480	15 30 45	chry. - I - 8 II - 7 I - 28 II - 19 62

ECI

2.2.9-8

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site Bonlom Date 10/14/79 Size of quadrat

Field Analysts: Ellis - Ellinwood Sheet No. of

General description of land Shadscale -

T.D. 95° A. 195° S 12% . T 1S R. 99W S 12 NW NW

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total Cover	10	15	10	2	20	0	5	5	3	10
Gutierrezia sarothrae	50				70		70			
Oryzopsis hymenoides	50	20					30			60
Eriogonum sp. (long gray leaves)		30	20							
Hap. spin.		30						5	50	10
Phlox sp.		20	10						50	10
Ag. trachy.			70	100	20			90		20
Br tectorum					10					
Astragalus sp. (seedling)										

Mentzelia sp.

Upland Meadow (2.2.10)

2.2.10-1

LINE STRIP DATA SHEET FOR WOODY VEGETATION AND SPARSE FORB-GRASS COVER

Field Analyst: Ellis Baker Project: 5-3 Date: 10/
Site: Permanent on site Length of Line: [illegible]
25 R: 99W Sec.: 5 ¼ Sec.: SW/ASE Transect Direction:
General Description of Land: ~~[illegible]~~ Permanent upland meadow
Vegetation Type: Upland meadow Condition of Foliage:
Aspect 315° Slope 20% Slope 20%

MATURE Class 3" plus diam. Reproductive class 3' high < 3" diam.

Species	I_1	I_2	I_2-I_1	Diam. In.	Basal Area Sq. Ft.	Species	I_1	I_2	I_2-I_1	Number Per 50' Units
						Big Sage	1000	1030	30	I_1 3
Juniper				27	II_1 1		1150	1170	20	
							2300	2330	30	II_1 24
							2420	2450	30	
							2500	2530	30	
							2500	2585	85	
							2690	2715	85	
							2900	2950	50	I_2 11
							2195	2205	10	II_2 20
							2910	2915	5	
									315	
						Serviceberry				I_1 5
						Pinon				II_1 2 I_2 1
						Rabbitbrush				I_1 7 II_2 1

ECI

2.2.10-2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 83 Site PERM Date 10/16/79 Size of quadrat

Field Analysts: BAKER - ELLIS Sheet No. of

General description of land Upland grass

T.D. 240 A. 315° S 20%. T.25 R.99W S.5 SW SE

Species	Quadrat Number										Σ
	1	2	3	4	5	6	7	8	9	0	R
Total Cover	10	15	10	10	15	15	10	10	15	20	1
Penstemon sp.	10				5	5	5		T		2
Astragalus sp.	5			5	5		T	5			2
Ag trachy,	20	10	40		10	10	15	20	25		1
Arenaria sp.	15	10	5		5	5		5	10		5
Phlox	20	40		45						25	1
Poa sp.	10	10	30	40	10		20	5	20		1
"Hymenoxys"	5	5		10	5	5	15			5	5
Gutierrezia	10					10	5	10	5		4
Unknown [illegible]	5										
Haplopappus sp (mat).		20			55	10	20	50	40	70	3
Sphaeralcea		5									
[illegible]			15		5						2
Oryzopsis hymenoides			10								1
Hap spin.						5	20	5	5		3
Σ column											

ecology consultants, Inc.

2.2.10-2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project F? Site Permanent, upland meadow Date 10/10/74 Transect direction 198° ~~Size of~~ quadrat

Field Analysts: Kelley - Ellis Sheet No. 1 of 1

al description of land T1S R100W sec 4 ¼sec NE SE

Aspect 280° slope 11% Soil: fine about 4" deep to shale bedrock

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0	
Total cover	50	30	50	25	25	40	25	20	50	15	3
shrub ? Eriogonum corymbosum	30		25	5		10		5	30	—	10
Artemisia frigida	10	5			5			T	5		
Oxytropis lamberti	5				T	5	5	T	T	5	
Agropyron trachycaulum	20	75	30	40	30	20	50	70	30	50	4
Koeleria cristata	5	T	10	T	T	5					
Haplopappus spinulosus	10	T		5	10	20	10	5	T	30	9
mat Penstemon	5		5	15	15	5	5	T		T	
Poa sp	10	10	25	30	5	15	20	15	30	5	
wooly base Hymenoxys sp ?	5	5		5	T	T	T	T		5	2
Androsace septentrionalis	T					T			T		>
Draba sp	T			T	T						>
Arenaria sp	T				T		T	T		5	
Hedysarum boreale		T				20	10		T		3
Gutierrezia sarothrae		5					T	5			1
Large pods Astragalus sp		T									>
Cryptantha				T							>
Tetradymia ?					30						3

Photo. Looking south along transect

Lupinus
Oryzopsis

ECI
ecology consultants, Inc.

2.2.10-4

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

roject 83 Site Random on site meadow Date 10/18/74 Size of quadrat
ield Analysts: Kelley - Ellis Sheet No. 1 of 1
eneral description of land T 25 R99W Sec 5 SW SE
Bald Knoll Aspect NW Slope 30%

Species	Quadrat Number 1	2	3	4	5	6	7	8	9	0
Total cover ✓	30	20	15	15	10	30	10	15	10	20
"Hymenoxys"	5	T			25	T	10	5		
Poa	30	15	5	5		5		5	20	10
Arenaria	5	T	10	5	25	5	10	5	5	10
Chna seed	15	15		5						
Koehleria cristata	5			T					5	
Haplopappus mat ?	10	40	65	50		25		50	35	
Chvi	15 ✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Agtr	10	5	10	5	30	15	30	10	5	35
Gufi	5	5	5			10			10	
Hasp		20	5	10	10	5	15	10		5
mat penstemon				5	25		20		5	
[illegible]ositae				5						
Crypto plant silvery leaf				10	5					
Erigeron					T					
Eriogonum						35	15	10	15	
Astragalus							T	5		
Hedysarum sweet vetch										35
Erak										5

2.2.10-2

QUADRAT DATA SHEET FOR UNDERSTORY AND RANGE VEGETATION

Project 93 Site Random upland Meadow Date 10/10/74 Size of quadrat –

Field Analysts: Kelley – Ellis Sheet No. 1 of 1

[illegible]al description of land T1S R100W Sec 4 ¼ sec NENE

Aspect 260° Slope 8% soil – shallow – bedrock at 6"

Species	Quadrat Number									
	1	2	3	4	5	6	7	8	9	0
Total cover	40	25	20	30	20	40	30	25	20	30
Agropyron trachycaulum	55					40	30	15	20	25
Oxytropis lamberti	5			T	1	5				
Artemisia frigida	2	5			5		5	10		20
Arenaria	1	T	T	10	1	T	5		5	5
Haplopappus spinulosus	2	5			~~0~~ 1	10		5	10	10
Poa sp	10	35	35	70	50	30	40	20	15	25
brush Eriogonum corymbosum ?	10	15		10				T	10	
Hedysarum boreale	15					T			25	
mat Penstemon		35	50	5	35	10		5	5	T
Gutierrezia sarothrae		T					10	30		
Koelaria cristata		T		T	1		5	10	T	10
Wooly base Hymenoxys ?		5	15		5	5	5		10	
[illegible]a		T			T					
Erigeron sp				5						
Androsace septen-					1		T		T	5
Eriogonum alatum							T	5		

Cryptantha sp.

Artemisia tridentata – Artemisia tridentata appears to be invading into this meadow from downslope.

Lot of rodent activity here

ECI

ecology consultants, Inc.

2.3.2. GRAZING EXCLOSURES

2.3.2.1. INTRODUCTION

The grazing exclosures established on and near Tract C-a are designed to demonstrate and monitor vegetative responses to the exclusion of particular groups of grazing or browsing herbivores. Various forage species can be expected to respond to protection according to their position in the hierarchy of consumer preferences. Thus, the most desirable components of the plant community should react more dramatically to a release from the restraints exercised upon them by herbivores.

Both quantitative and qualitative study techniques, plus photoplots, will be utilized to measure these responses. All techniques, however, will focus on the incremental forage production resulting from the degree or quality of protection being afforded.

Careful evaluation of data obtained during this study should reveal several important aspects of ecosystem interactions. It may be possible to determine plant species preferences for each class of herbivore. The protected exclosure will serve as a basis for comparisons to similar communities outside the exclosures.

2.3.2.2. METHODS AND MATERIALS

2.3.2.2.1. Exclosure Design and Sampling Technique

Three exclosures have been situated in scattered pinyon-juniper types (Figure 1). All the key browse species, serviceberry (Amelanchier sp.), bitterbrush, (*Purshia* sp.), snowberry (*Symphoricarpos* sp.), chokecherry (*Prunus* sp.), and mountain mahogony (*Cercocarpus* sp.) are distributed on the exclosure sites. Substantial use by livestock and wildlife was evidenced by browse condition and density of fecal groups at each site. Each exclosure encompasses (3A) 1.21 ha measuring 190.9 m (626 ft) x 63.6 m (208.7 ft) (Figure 7). An exclosure contains three compartments or sections, each constructed to prevent access by particular groups of herbivores (National Academy of Sciences - National Research Council, 1962). The largest compartment contains 0.61 ha (1.5 A) and is constructed of standard 4-strand barbed wire fence (with a wooden rail as the top strand) on three sides of the compartment. This compartment excludes domestic livestock and wild horses but allows free access to big game able to leap the fence and small wildlife that can enter through or under the wire. The other one-half of the exclosure is constructed of 2.74 m (9 ft) high woven-wire. The second compartment, located within this half and enclosing 0.4 ha (1 A), excludes big game and livestock, but not smaller mammals. The third compartment, 0.2 ha (0.5 A) in size, with the addition of 0.91 m (3 ft) poultry wire buried to a depth of 25.4 cm (10 in) is designed to prevent entry by all mammalian herbivores, including lagomorphs and other small mammals. In order to prevent disruption of established plots, it is most important that reliable means be implemented to prevent intrusion by herbivores. Some residents will remain after construction is complete and others will probably gain entrance by circumventing the physical obstacles. Burrowing rodents could totally destroy the area for sampling purposes in a short time. It is therefore necessary to scrupulously maintain trapping stations inside these compartments as an extra precautionary measure

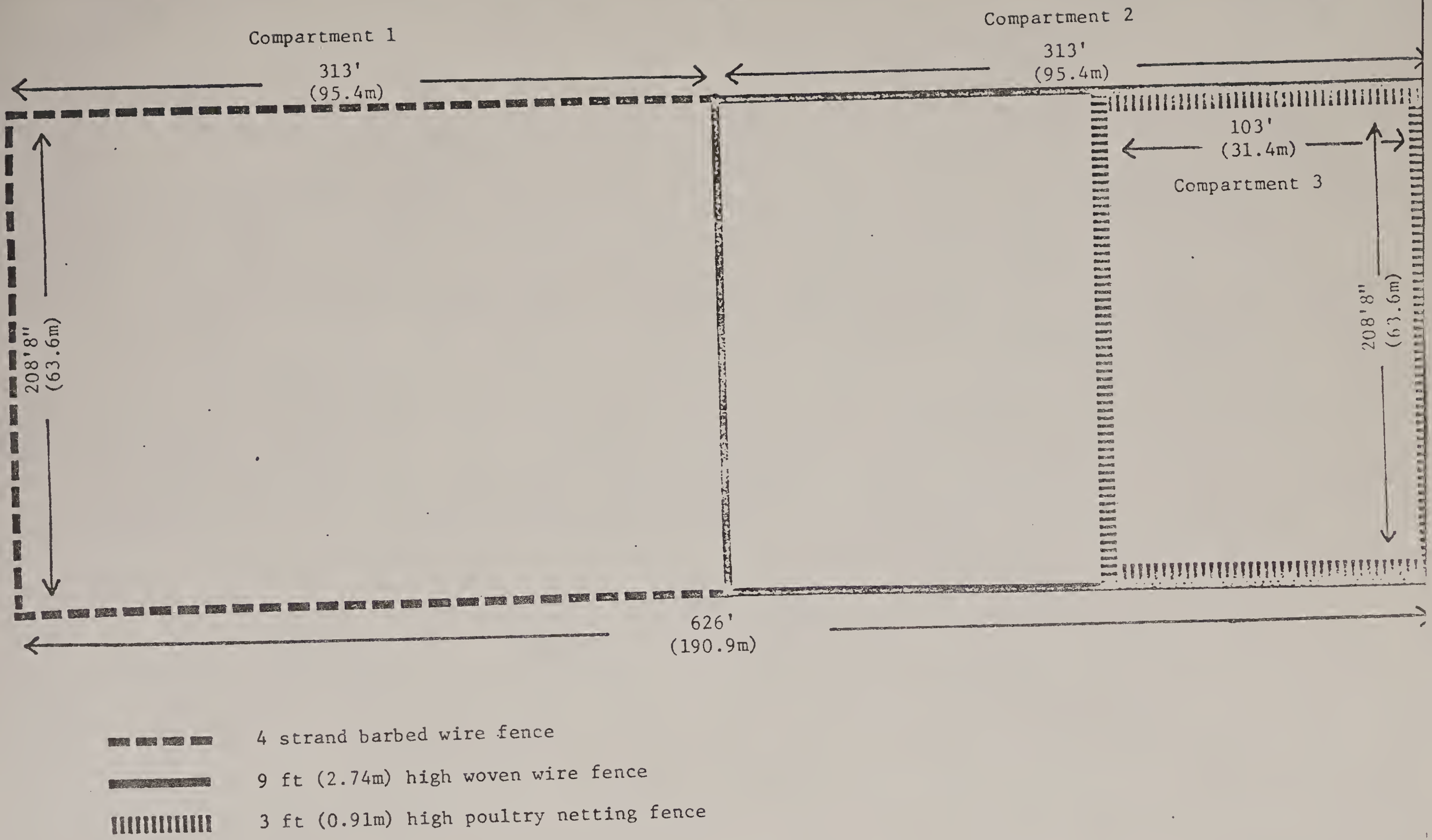


Figure 7. Design of the grazing exclosures used for the Rio Blanco Oil Shale Project.

and check frequently for rodent encroachment.

In addition to the three compartments within the exclosure, one study area commensurate in size to the largest exclosure compartment is established outside each exclosure. This comprises the control or "non-treatment" plot subjected to normal foraging pressures. The site is next to the exclosure and permanently marked by metal stakes.

A minimum 7.62 m (25 ft) buffer zone between the fence and sampling areas is strictly observed in an attempt to reduce several of the prejudicial factors inherent in exclosure studies. Fences intercept precipitation and accumulate snow drifts, significantly altering soil moisture conditions below and adjacent to them. Site disturbance during fence construction may have long-lasting effects. The partial shading by fences can affect light and soil seed dispersal, and thereby, plant establishment and distribution. Sampling is undertaken once each year near the completion of the growing season in late July or early August. Different sampling techniques are implremented for each of the three principal strata of the plant community.

Grass-Forb Stratum

This stratum is sampled by a combined ocular estimate - clipped plot method (National Academy of Sciences - National Research Council, 1962) on a permanent grid. Size of the grid and numbers of samples are commensurate with the size of the exclosure compartment. In the 0.2 ha compartments, a 15.24 m (50 ft) x 30.48 m (100 ft) grid is established. In the 0.4 ha

compartments, 30.48 m grids are used. In 0.61 ha compartments and on the external (control) plot, grids measure 45.72 m (150 ft)x 30.48 m.

Permanent grids are centered in each exclosure by locating each corner via cross-sightings with a transit and a tape measure. Each corner is then marked with a metal stake. The number of sample plots within each grid is directly proportionate to the compartment (and grid) size. In 0.2 ha compartments, there are 5000 possible sample points; 10,000 in 0.4 ha compartments; and 15,000 in 0.61 ha compartments. Sample plot locations measure 15.24 cm (6 in) x 60.9 cm (24 in) and are assigned a number according to column and row.

Prior to actual sampling, one percent of all possible sample points is selected from random number tables. Thus, there are 50 sample points in 0.2 ha, 100 in 0.4 ha and 150 in 0.61 ha compartments.

Sample plots are located by the following procedure: A reel-type tape is stretched along the lower (relative to the position of the exclosure) axis of the grid. Columns are located at 15.24 cm (6 in) intervals along this baseline tape. Rows are located by stretching another tape at a right angle to the first, using a transit to maintain a perpendicular position. This procedure locates the lower right corner of the plot for the observer. A rectangular quadrat frame, hirged in order to circumvent woody plants, is then placed at that point.

The rectangular quadrat shape was selected because it is widely regarded by quantitative plant ecologists as the most efficient plot shape (Kershaw, 1966; and Grieg-Smith, 1964). "Comparative studies have shown that relatively

long plots are more efficient than isodiametric plots as sampling units, especially when some of the elements of the vegetation are highly aggregated in their occurrence patterns," (Cain and Castro, 1959). The quadrat size 0.15 m (0.5 ft)x 0.59 m (1.92 ft) was selected because its area,0.08 sq m (0.96 sq ft) is amenable to conversion to a per acre basis (grams/plot x 100=lbs forage/acre).

After a short training period, during which repeated ocular estimates followed by clipping comparisons are made until acceptable reproducibility of results is achieved, a trained observer orients the quadrat frame to the lower left corner of each plot location, then ocularly estimates the green herbage (grass and forbs only) in grams and records his estimate on a standard field data form (Figure 8). At each fifth plot, the herbage is clipped and weighed with a hand-held spring scale. All plot clippings are recorded and coverted to (lbs/acre) kg/ha dry weight.

When sampling is completed, clipped and ocularly estimated plot weights can be compared to obtain a "correction factor", which, when multiplied by the ocular estimate, yields the "corrected" weight. When, for example, clippings have a mean (or total) weight that is 12 percent higher than ocular estimates, each plot estimate is "corrected" by multiplying it by 1.12. Corrected estimates of each grid can then be averaged to obtain a green herbage production estimate.

A further "correction factor" is applied to conver "green forage weight" figures to "dry forage weight". Bags of clippings are marked for identification and transported to the ECI laboratory. Clippings are "oven-dried" in

Project ____________ Site ____________ Date ____________

Observer ____________ Page ______ of ______

Ocular Estimate	Clipped Weight	Ocular Estimate	Clipped Weight	Ocular Estimate	Clipped Weight	Ocular Estimate	Clipped Weight
1		26		51		76	
2		27		52		77	
3		28		53		78	
4		29		54		79	
5		30		55		80	
6		31		56		81	
7		32		57		82	
8		33		58		83	
9		34		59		84	
10		35		60		85	
		36		61		86	
12		37		62		87	
13		38		63		88	
14		39		64		89	
15		40		65		90	
16		41		66		91	
17		42		67		92	
18		43		68		93	
19		44		69		94	
20		45		70		95	
21		46		71		96	
22		47		72		97	
23		48		73		98	
24		49		74		99	
25		50		75		100	

Figure 8. Data form for recording ocular estimates and clipped weights of the grass-forb stratum for Rio Blanco Oil Shale Project.

a Thelco oven at approximately 40^{0}C for at least 24 hours. Bag contents are then weighed and these weights compared to the undried weights. A mean of the proportions thus obtained is then applied to all plot estimates to yield "dry weight" forage production.

Shrub Stratum

It is necessary to use qualitative rather than quantiative sampling techniques on the shrub stratum. Quantitative measurements of browse production would require herbage removal on shrubs within the exclosures. This would introduce extreme bias because of the limited number of browse plants occurring within the sample areas. Clipping would thus reproduce the impact the exclosure is designed to negate, such as concentrating growth hormones in clipped areas of the plant, altering growth forms, and causing other negative side-effects.

It becomes necessary, therefore, to utilize methods which yield useful relative and qualitative information but cannot provide net production data. The method chosen is to locate a .004 ha (1/100 A) circular plot in the center of each grid. The disadvantages inherent in the shape of the plot are mostly offset by the large size of the plot in proportion to the grid area; a larger percentage of the area is sampled (Cain and Castro, 1959).

A stake is driven in the center of the permanent grid and another near the perimeter of the plot to mark a starting point. A full circle is then circumscribed with an 3.6 m (11.8 ft) radius. Every shrub rooted within the plot is recorded on a field data form (Figure 9) to species, maximum height, mean crown diameter, percent of the canopy that is alive, and percent of the plant available to a potential browsing animal.

Maximum shrub height is measured with a pocket tape and recorded in cm as the greatest distance of live portions of the plant from ground level. Mean diameter is the average of the greatest and least diameters of the shrub and is also measured with a pocket tape placed horizontally at the level of maximum canopy development. Percent of the shrub which is alive and percent available as browse are both ocular estimates.

roject ________________ Site ________________ Date ________________

bserver(s) ________________ Page ______ of ______

Species	Maximum Height	Mean Crown Diameter	Percent Alive	Percent Available	Remarks

Figure 9. Data sheet for 1/100 acre shrub plots for the Rio Blanco Oil Shale Project.

Tree Stratum (Pinyon-Juniper Canopy)

The tree canopy need be measured only at the beginning and end of the study period or at infrequent intervals if the study is of long duration. The simplest procedure available is to measure the canopy intercepting a line which traces the perimeter of the established grass-forb grid. Tapes are stretched between corners of each grid and the distances of canopies intercepting those tapes recorded by species.

The importance of pinyon and juniper as a component of wintering mule deer diets has not been adequately established. Many researchers credit the species with providing large quantities of browse during critical winter periods (Kraiger, Ron. 1974, Colorado Division of Wildlife's Little Hills Experimental Stations, Personal Communication). The appearance of pinyon and juniper trees in the Piceance Basin seems to support this supposition. Most large trees are browsed to a uniform height (high line level) of about 1.83 m (6 ft). The importance of these species will be reflected in a minor change to the standard line-intercept procedure implemented to measure browsing effects on pinyon and juniper. Canopy intersecting the line that is less than "high-line level" or 1.83 m high (De Vos and Mosby, 1971) will be recorded separately (Figure 10). The proportion of lower canopy can be expected to increase in the protected compartments of the exclosures if those plants are ordinarily browsed heavily by deer.

2.3.2.2.2. Photoplots

"Photographic plots provide a visual record of change or lack of change in the vegetation cover. They are useful for illustrative purposes but in themselves do not provide a quantiative measure of the vegetation. When used in conjunction with quantiative methods, they become valuable records", (National Academy of Sciences - National Research Council, 1962).

At each exclosure, three individual shrubs of each major browse species are selected for photographic documentation in each sample grid (for a total of 12 individuals/species at each exclosure site). Plants selected are healthy and of medium size. During the first photo-sampling season, shrubs are tagged and permanently marked.

LINE STRI

SPARSE FORB-GRASS COVER

Date:____________

eld Analyst:____________ Project:________ Length of Line:____________

:____________ ¼ Sec.:________ Transect Direction:________

R:\________ Sec.:________

neral Description of Land:________ Condition of Foliage:____________

getation Type:____________

MATURE Class: plus diam.

Reproductive class 1' high < diam.

ecies	I_1	I_2	I_2-I_1	Diam. cm	Basal Area m^2	Species	I_1	I_2	I_2-I_1	Number Per 50' Units

Figure 10. Line strip data sheet for woody vegetation and sparse forb-grass cover for the Rio Blanco Oil Shale Project.

ECI

A white-painted 1.22 m (4 ft) x 1.83 m (6 ft) masonite sheet, cut in two and hinged to facilitate handling, is used as a backdrop for photographing each shrub (modified from Springfield, 1974). Gradations are marked in black on the borders of this sheet.

In the first season, photoplots are permanently located by driving rebar stakes at a point indicated by a plumbline suspended from the camera tripod and at corners of the backdrop sheet. In succeeding years, plots are relocated and rephotographed by use of those reference points. Photoplots are taken each year unless comparison of the first two years' photographs indicate that extended sampling intervals would be more efficient. Sampling is timed to correlate with the important phenological stage of the shrubs in midsummer, at the completion of twig elongation.

The grazing exclosures and control sites will be sampled during August 2-7, 1975. The data obtained during this sampling period will be included in the Third Quarterly Report.

2.3.2.2.3. Soils Studies

INTRODUCTION

Soil sample collections are designed to characterize the soils at each vegetation sampling site in terms of specific physical and chemical properties which have ecological significance and to identify land stabilization problems in terms of identifiable soil characteristics.

This serves to define the plant-soil relationships operating in the various ecosystems in the project area. It, in turn, provides a basis for engineering and rehabilitation decisions. Work outlined here provides average soil characteristics at each of the vegetation sampling sites and at the exclosure sites.

METHODS AND MATERIALS

Soil Sample Collection

Soil samples are collected from each of the permanent vegetation sampling sites and the three grazing exclosures (Figure 1) during spring 1975, when the ultimate soils contractor is in the field. The following technique, as defined by the Soil Conservation Service (Jim Crabbe, personal communication) is used to collect soils for determination of average nutrient and texture values of the upper portion of the soil profile. Five soil samples are taken from each site and thoroughly mixed in a closed container to provide a composite sample for that site. Soil samples are taken to a depth of 30.5cm (12 in), or to bedrock if shallower, with a 2-inch diameter hand auger. Subsamples weighing 250 g are taken from each composite sample for laboratory analysis. Soil depth is determined after extracting the sample by extending two of the auger holes in each set of five to a maximum depth of 61cm (24 in), or to the limit of hand augering if the soil is deeper. Soil erosion conditions in the vicinity of each sampling site are rated as stable, slight, moderate, critical, or severe based upon standard criteria for these classes (Bureau of Land Management, 1971).

Laboratory Analysis

The laboratory procedures used to analyze the soil samples, as developed by the subcontractor, provide data on the physical and chemical properties necessary to define the plant-soil relationships of the area of investigation. These properties include:

a. Physical Properties
   (1) Textural classification for each soil type
   (2) Water-holding capacity
      (a) Saturation water percentage, determined gravimetrically with oven drying.
      (b) Water retention percentage after suction at 20 cm H_2O; provides an index of plant-available water capacity of soil sample.

b. Chemical Properties
   (1) Available plant nutrients, ppm
      (a) NO_3
      (b) P; $NaHCO_3$-extractable
      (c) K; NH_3OAc-extractable
      (d) Ca, Mg, Zn, Fe
   (2) pH; H_2O system and 0.02 M $CaCl_2$ system
   (3) Cation exchange capacity; NaOAc-extractable, Meg/100 g
   (4) Salinity; electrical conductivity of soil extract, Mmhos/cm
   (5) Na, Meg/100 g
   (6) Lime percentage
   (7) Organic matter percentage
   (8) Organic N, Kg/ha

The above determinations of physical and chemical soil properties were selected to provide data appropriate to the climatic and edaphic conditions in the project area.

Soil samples will be collected during May 24 - June 4, 1975 and subsequently analyzed by the subcontractor. The results of these analyses should be available for inclusion in the Third Quarterly Report.

2.3.3. SMALL MAMMALS

2.3.3.1. INTRODUCTION

The small mammal census program is designed to identify the species of small mammals that occur within Tract Ca and its contiguous area, to determine their densities in dominant habitats, and to develop a designation of important species. Seasonal periodicity of activity, reproductive effort and trophic relationships are to be described. Small mammal habitat preferences will be determined and species diversity values will be calculated for the various habitats.

2.3.3.2. METHODS AND MATERIALS

2.3.3.2.1. Live Trapping

A live trapping program, consisting of 12 trapping periods during the 2-year baseline inventory, was initiated during October 1974. To coincide with periods of increased small mammal activity and to provide adequate data on reproduction and other population parameters, sampling is being conducted during October 1974, May, June, July, September, and October, 1975 and during May, June, July, and September 1976. Trapping periods during December 1974 and 1975 will provide information on small mammal winter activity patterns. Within and adjacent to Tract Ca, five - 7.29 ha (18 A) grids were established to sample small mammal activity within the major vegetation associations (i.e., pinyon-juniper on north and south facing slopes, sagebrush, greasewood-sagebrush and mixed brush). Each grid has dimensions of 270 x 270 m and consists of 133 stations, permanently marked with numbered stakes and flagging. The center of each grid consists of 49 stations, in a 7 x 7 pattern, spaced at intervals of 15 m. The remaining 84 stations, forming the boundaries of the grid, are spaced 30 m apart (Figure 11). This grid size and pattern is designed to aid in estimating population densities and home ranges for both the smaller rodents (mice and voles) and the larger, wider ranging chipmunks and most ground squirrels.

Thirteen - 0.81 ha (2 A) grids and two - 1.35 ha (3.3 A) grids are also used in the trapping program. These grids are designed to sample

additional major vegetation types not sampled by the 7.29 ha grids (Table 4).

To provide a basis for comparison of population data from different sized grids, the 0.81 ha grids consist of 33 permanently marked stations in the same configuration as the center three lines of the larger grid (Figure 12). As the Aspen and Douglas fir communities contain species of voles not generally found in other vegetation types in the area, four rows of seven stations each are added to the center of the 0.81 ha grids established in these communities (Figure 13). The resulting 1.35 ha grids will provide more accurate population density and home range estimations. The types of vegetation sampled by the different grids are listed in Table 4 and grid locations are shown in Figure 14.

At every station for all grids, a 3x3x10" Sherman live trap is set during spring, summer and fall sampling periods. Since small mammal activity is greatly curtailed during the winter season, and because repeated captures of the same individuals during cold weather will produce an unacceptably high number of trap deaths because of hypothermia, an extensive trapping program during December 1974 and 1975 could reduce population numbers and preclude objective interpretation of results. Consequently, during these periods only 33 stations of the 7.29 and 1.35 ha grids in the same configuration as the 0.81 ha grids (Figure 12), and all stations of the 0.81 ha grids are operated.

Traps are baited with a mixture of peanut butter, rolled oats and cracked corn and checked for five consecutive days during each of the 12 sampling periods. To minimize desiccation and death of trapped animals from intense solar radiation in the Piceance Basin, cardboard is positioned over each trap in a ∧ shape to provide shade for animals captured during the day. During winter trapping periods, a wad of dacron or cotton batting is placed at the back of each trap for bedding material to minimize the number of deaths from hypothermia.

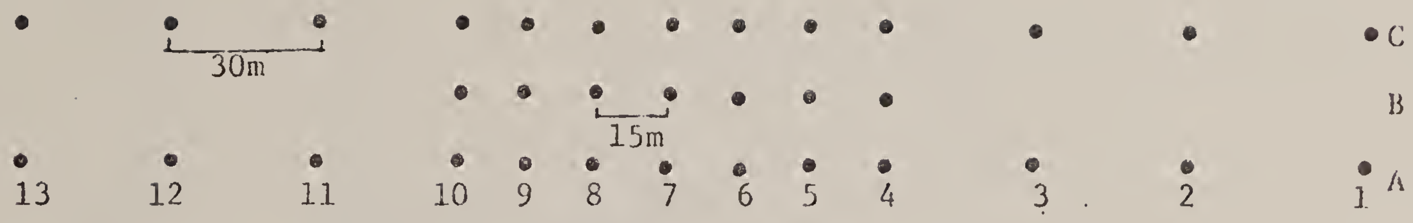


Figure 12. Pattern and spacing of trapping stations for the 0.81 ha grids used for the Rio Blanco Oil Shale Project.

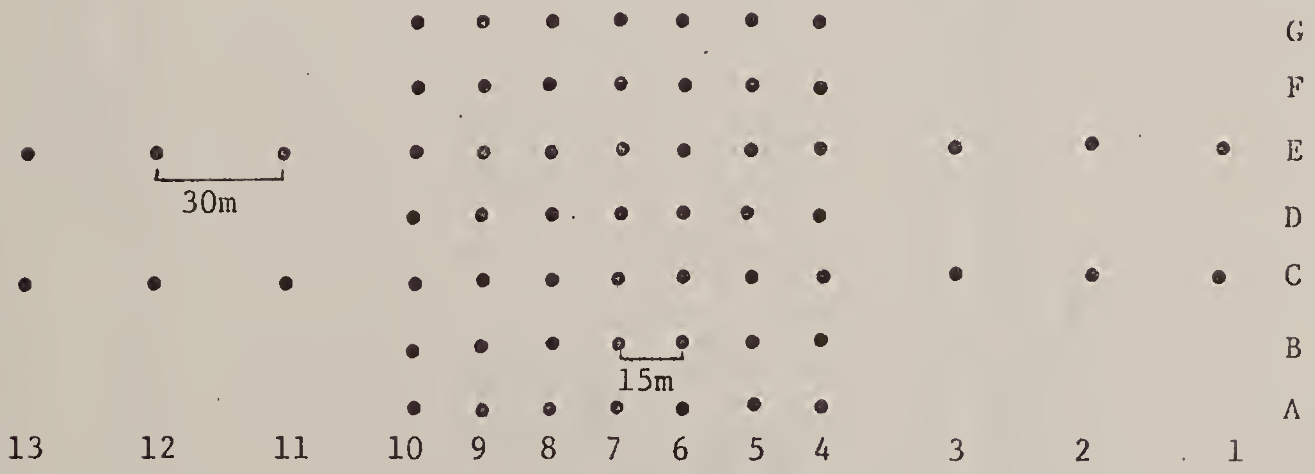


Figure 13. Pattern and spacing of trapping stations for the 1.35 ha grids used for the Rio Blanco Oil Shale Project.

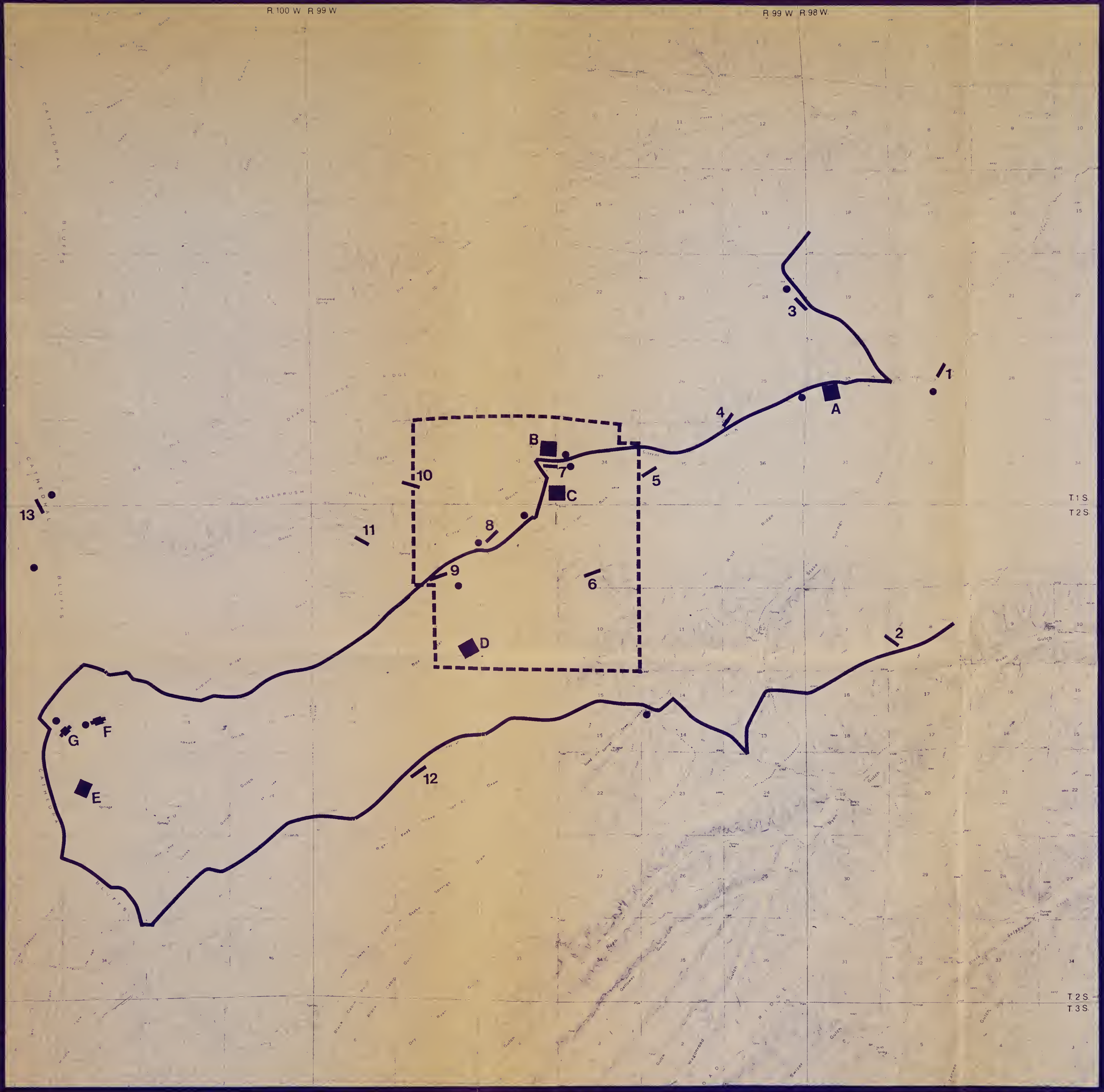
Table 4. Sizes and distribution of small mammal live trapping grids within different vegetative communities on and near Tract C-a for Rio Blanco Oil Shale Project

Vegetative Community	7.29 Hectare Grids On Tract	7.29 Hectare Grids Off Tract	0.81 Hectare Grids On Tract	0.81 Hectare Grids Off Tract	1.35 Hectare Grids On Tract	1.35 Hectare Grids Off Tract
Aspen						1(G)
Douglas fir						1(F)
Mixed brush		1(E)		1(11)		
Upland meadow			1(9)	1(13)		
Bottomland meadow				1(1)		
Pinyon-juniper (southern slope)	1(B)[1]			1(4)		
Pinyon-juniper (northern slope)	1(C)			1(6)		
Pinyon-juniper (western slope)				1(2)		
Pinyon-juniper/sagebrush				1(12)[2]		
Pinyon-juniper/mixed brush			1(10)[2]			
Sagebrush (northern slope)	1(D)		1(8)	1(3)		
Greasewood-Sagebrush		1(A)	1(5)			
Rabbitbrush			1(7)			

---

[1] Figures in parentheses indicate the grid designation as shown in Figure 14.

[2] Grid established in edge habitat.



TERRESTRIAL ECOLOGICAL INVESTIGATIONS

RIO BLANCO OIL SHALE PROJECT

SMALL MAMMAL SAMPLING SITES

● Pitfall Traps

⌒ Night Spotlight Census Route

Live Trapping Grids

■ 7.29 Ha (18 A) grids

A Greasewood — Sagebrush
B Pinyon - Juniper (southern slope)
C Pinyon - Juniper (northern slope)
D Sagebrush (northern slope)
E Mixed brush

▬ 1.35 Ha (3.3 A) grids

F Douglas fir
G Aspen

— 0.81 Ha (2 A) grids

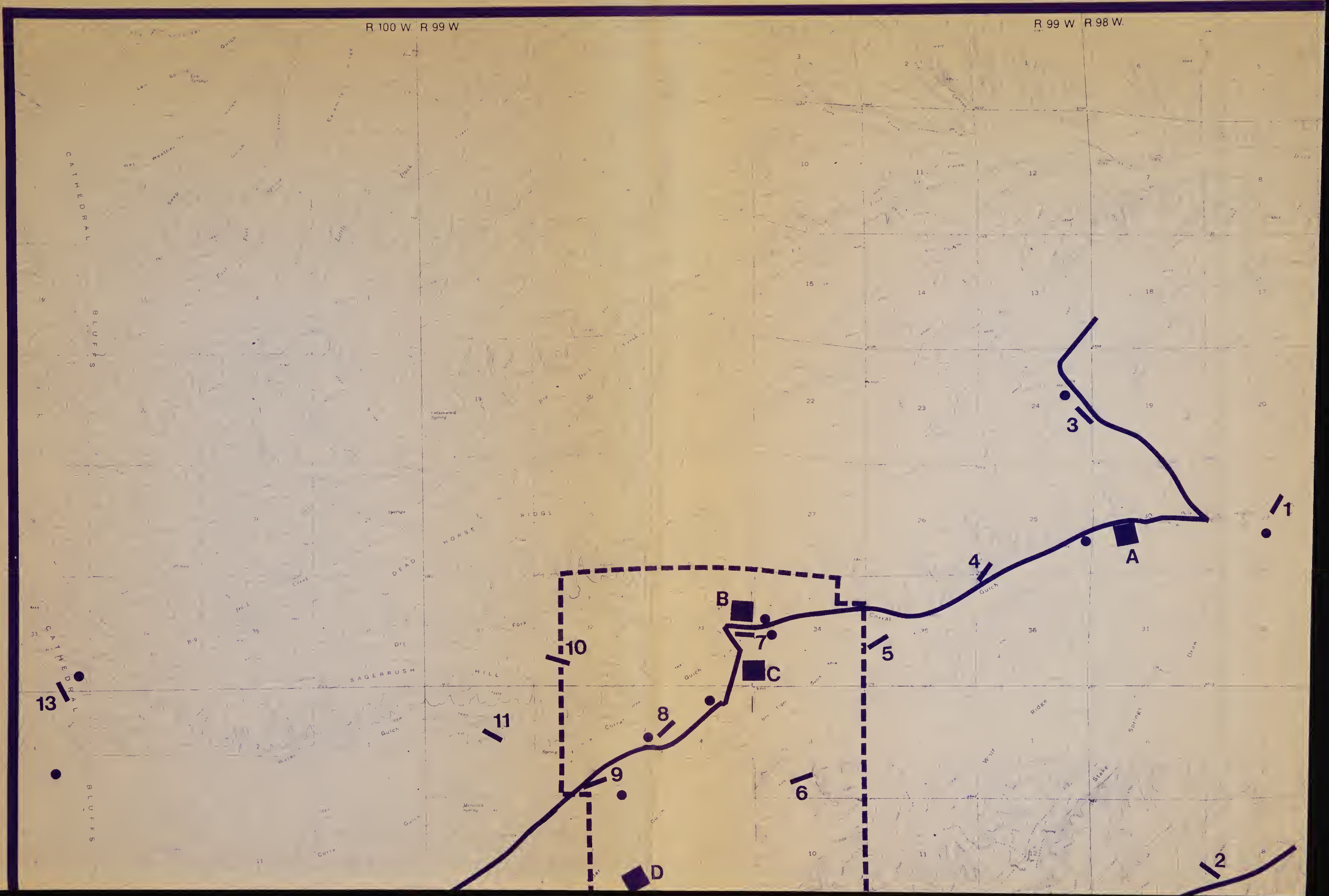
1 Bottomland meadow
2 Pinyon - Juniper (western slope)
3 Sage
4 Pinyon - Juniper (southern slope)
5 Greasewood - Sagebrush
6 Pinyon - Juniper (northern slope)
7 Rabbitbrush
8 Sagebrush (northern slope)
9 Upland meadow
10 Pinyon - Juniper / Mixed brush
11 Mixed brush
12 Pinyon / Sagebrush
13 Upland meadow

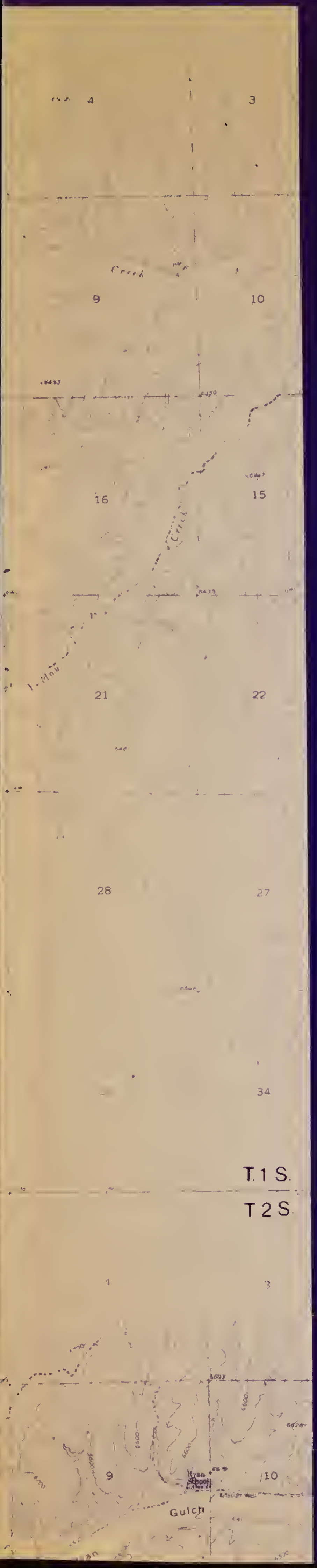
0 1/2 1 2 miles

NORTH

ECI

ECOLOGY CONSULTANTS INC.
Fort Collins, Colorado


R 100 W
R 99 W
R 99 W
R 98 W
CATHEDRAL BLUFFS
CATHEDRAL BLUFFS
DEAD HORSE RIDGE
SAGEBRUSH HILL
Corral
Gulch
Wolf Ridge
Springs
Stake
Draw
1
2
3
4
5
6
7
8
9
10
11
13
A
B
C
D



TERRESTRIAL ECOLOGICAL INVESTIGATIONS

RIO BLANCO OIL SHALE PROJECT

SMALL MAMMAL SAMPLING SITES

● **Pitfall Traps**

⌒ **Night Spotlight Census Route**

Live Trapping Grids

■ **7.29 Ha (18 A) grids**

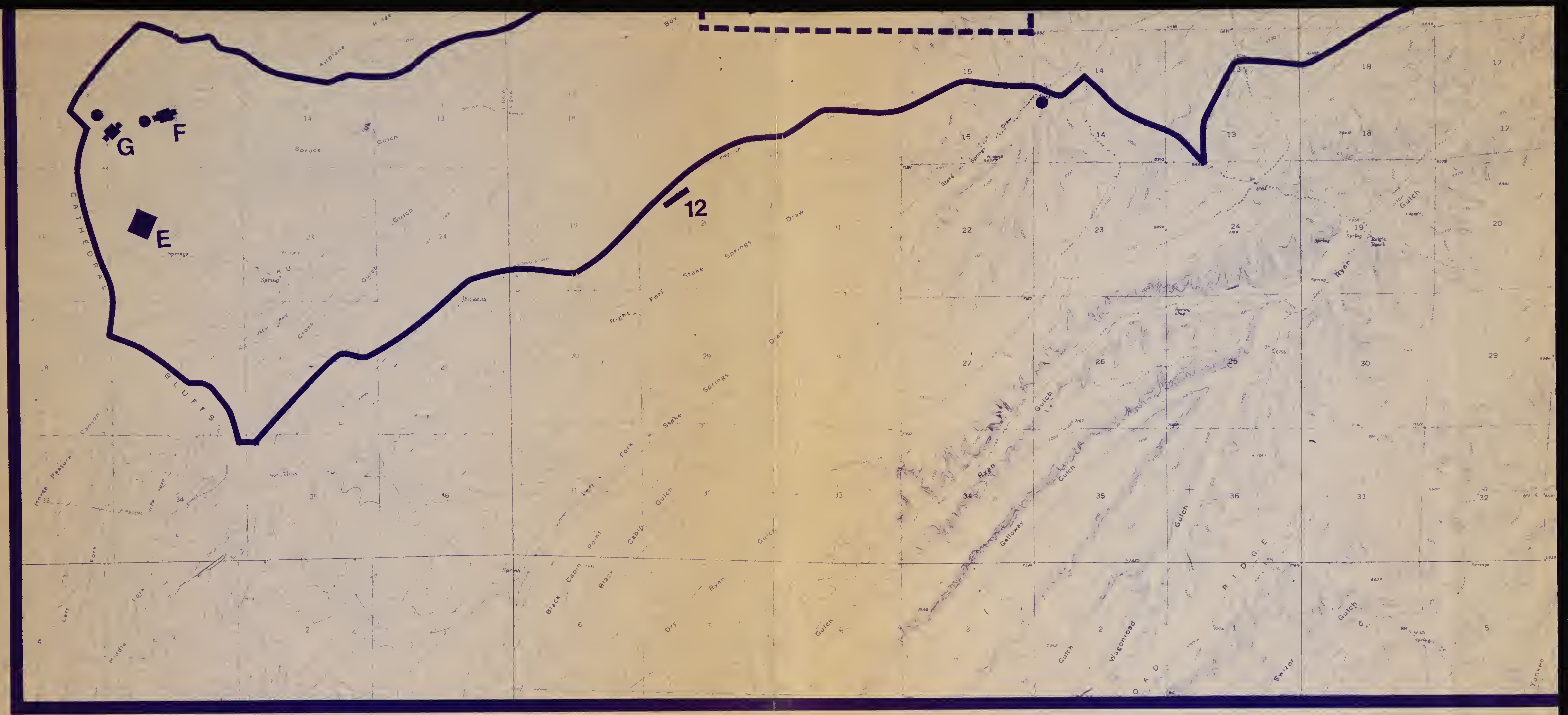
A Greasewood — Sagebrush
B Pinyon - Juniper (southern slope)
C Pinyon - Juniper (northern slope)
D Sagebrush (northern slope)
E Mixed brush

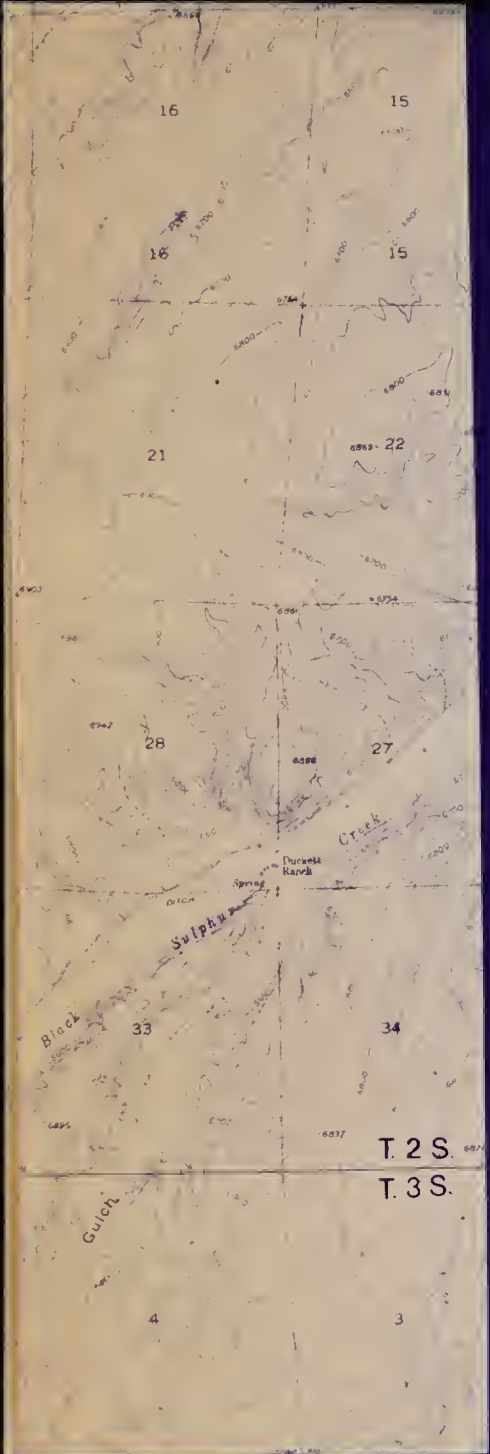
▬ **1.35 Ha (3.3 A) grids**

F Douglas fir
G Aspen

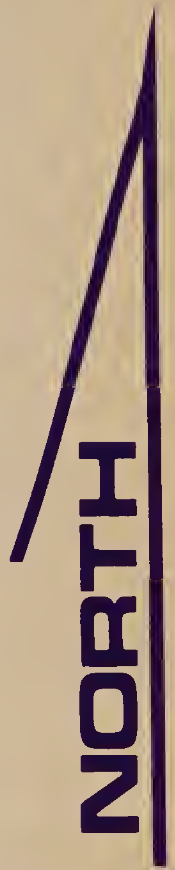
— **0.81 Ha (2 A) grids**

1 Bottomland meadow


G
F
E
12
CATHEDRAL BLUFFS
Airplane Ridge
Box
Spruce Gulch
Gulch
Springs
Spring
Cross
Right Fork Stake Springs Draw
Left Fork Stake Springs Draw
Cabin Gulch
Black Cabin Point
Black
Dry Ryan Gulch
Gulch
Horse Pasture Canyon
Left Fork
Middle Fork
Stake Springs Draw
Ryan Gulch
Galloway Gulch
Gulch
Wagonroad Gulch
RIDGE
ROAD
Swizer Gulch
Ryan Gulch
Yankee
15
14
13
18
17
22
23
24
19
20
27
26
25
30
29
34
35
36
31
32
33
3
2
1
6
5
4



2	Pinyon-Juniper (western slope)
3	Sage
4	Pinyon-Juniper (southern slope)
5	Greasewood-Sagebrush
6	Pinyon-Juniper (northern slope)
7	Rabbitbrush
8	Sagebrush (northern slope)
9	Upland meadow
10	Pinyon-Juniper / Mixed brush
11	Mixed brush
12	Pinyon-Juniper / Sagebrush
13	Upland meadow



ECI

ECOLOGY CONSULTANTS INC.
Fort Collins, Colorado

Figure 14. Location of small mammal live trapping grids, pitfall traps, and night spotlight census route used for the Rio Blanco Oil Shale Project.

Traps are reset and rebaited as necessary. All animals captured are distinctively marked by unique toe-clipping combinations and released (Figures 15 and 16). For each animal captured, the species, sex, age class, weight, reproductive status, general physical condition (if other than normal), capture location and animal identification number are recorded on a standard trapping form (Figure 17). Weights are determined to 0.5 g accuracy using a Pesola calibrated spring scale. Distinguishing characteristics between all morphologically similar species that might occur in the Piceance Basin have been identified by ECI. Measurements of these characteristics are routinely taken for all species captured whose identification is dependent upon such measures.

At certain times of the year, trap success may be very high. When a large proportion of traps are filled during one night, some animals may not have an opportunity to enter trap stations located within their home range. This phenomenon, indicated by a high ratio of new animals to recaptures from previous nights, may yield erroneous population data for some species. To insure adequate data for all species, an increased trapping effort, either more traps per night or more nights of trapping, is necessary. Therefore, on girds where the ratio of new to recaptured animals is unacceptably high (as determined from the literature) on the last day of the normal 5-day trapping period, the trapping effort will be extended for as many as five day to obtain adequate data.

2.3.3.2.2. Removal trapping and Laboratory Analysis

A removal trapping program designed to collect small mammals for laboratory analysis of reproductive effort or stomach contents will occur. Animals are being collected for analysis of stomach contents during October and December 1974; during May, July, October and December 1975; and during May and July 1976. Animals are being collected for analysis of reproductive effort during May, June and July, months of peak small mammal breeding activity, 1975 and 1976. The removal program is conducted sufficiently far from the live trapping grids to prevent interference with the live trapping operations. Ideally, for each of the three most common small

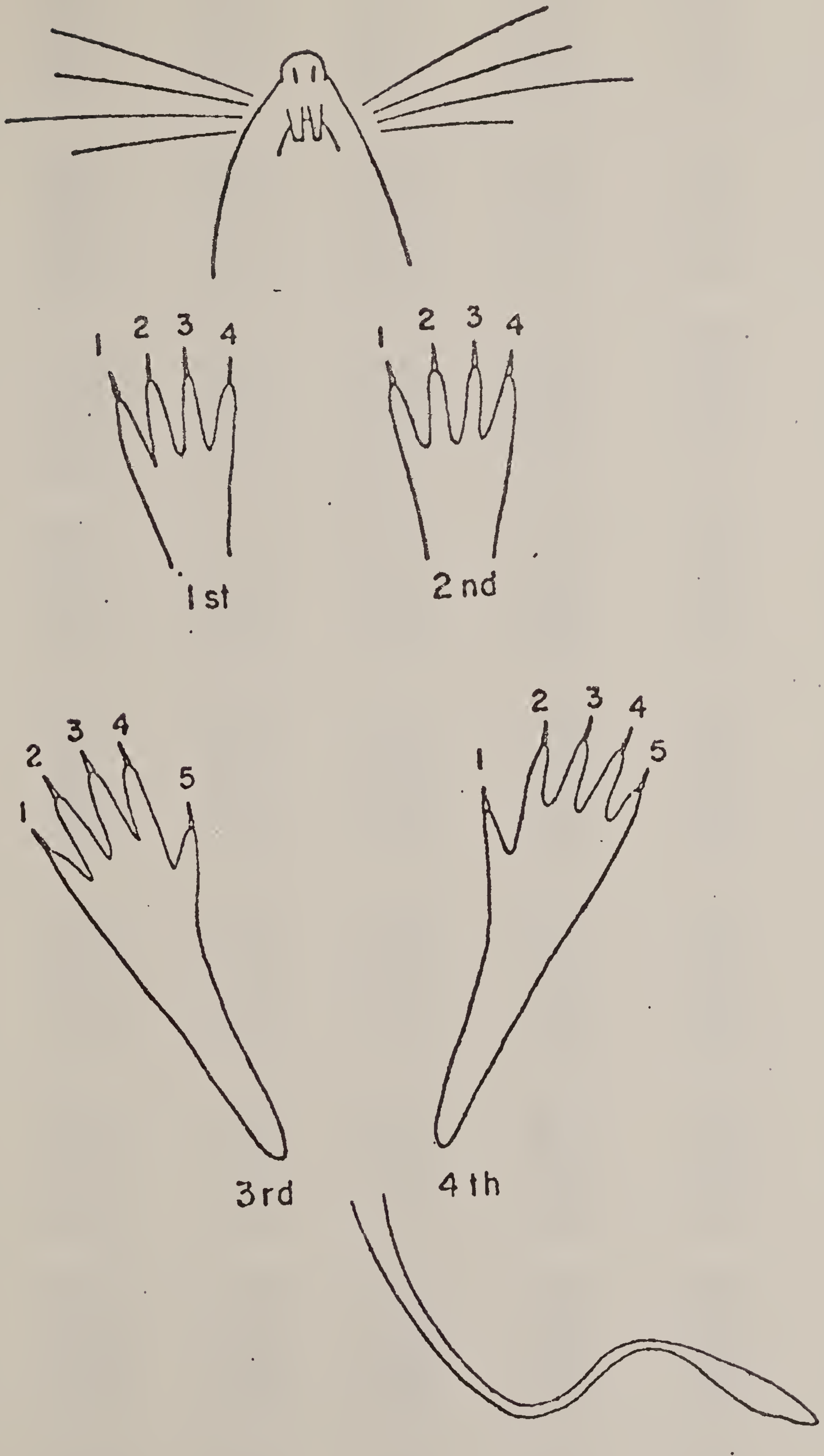


Figure 15. Small mammal toe marking scheme for the Rio Blanco Oil Shale Project.

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

0001
0002
0003
0004
0005

0010
0020
0030
0040
0050

0100
0200
0300
0400
1000

2000
3000
4000
0011
0012

0013
0014
0015
0021
0022

0023
0024
0025
0031
0032

0033
0034
0035
0041
0042

0043
0044
0045
0051
0052

0053
0054
0055
0101
0102

0103
0104
0105
0201
0202

0203
0204
0205
0301
0302

0303
0304
0305
0401
0402

0403
0404
0405
0110
0120

0130
0140
0150
0210
0220

0230
0240
0250
0310
0320

0330
0340
0350
0410
0420

0430
0440
0450
1001
1002

1003
1004
1005
1010
1020

1030
1040
1050
1100
1200

1300
1400
2001
2002
2003

2004
2005
2010
2020
2030

2040
2050
2100
2200
2300

2400
3001
3002
3003
3004

3005
3010
3020
3030
3040

3050
3100
3200
3300
3400

4001
4002
4003
4004
4005

4010
4020
4030
4040
4050

4100
4200
4300
4400
1011

1012
1013
1014
1015
1021

1022
1023
1024
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
1201

1202
1203
1204
1205
1301

1302
1304
1305
1401
1402

1403
1405
0111
0112
0113

0114
0115
0121
0122
0123

0124
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

Figure 16. Small mammal toe clip checklist for the Rio Blanco Oil Shale Project.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location:________________ Grid #:_______ Trap Night:______ Checked By:__________

Date, Time Traps Set:________________ Date, Time Traps Checked:________________

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*

diagnostic characters, parasites, etc.

Figure 17. Small mammal live trapping field data sheet for the Rio Blanco

mammal species, five specimens (including at least two females) are collected by a line of 40 snap traps in the major vegetation types where that species occurs. Trapping effort is increased in those vegetation types where capture success is low. However, if sufficient numbers of animals are not collected after four nights, trapping in terminated. All captured animals are immediately injected with 70 percent ethanol to prevent deterioration of internal organs. Prior to the laboratory analysis of reproductive effort or stomach contents, any internal parasites and general internal condition, if other than normal, will be noted. The species which are being collected and the vegetation types being sampled are listed in Table 5.

Laboratory Analysis of Reproductive Effort

The number of placental scars, pigmented areas of the uterus occurring at sites of previous placental attachments, has been used to determine litter size in small mammals (Davis and Emlen, 1948; Corthum, 1967). Since placental scars become increasingly lighter with increased age (Corthum, 1967) the degree of scar pigmentation can be used to indicate the approximate time of parturition (birth). Thus by examining the reproductive tract of adult females of selected species at regular intervals during the breeding season, information on litter size, number of litters per season, and time of parturition can be provided.

The laboratory procedures for examining placental scars involve removal of the female reproductive tract, which is placed in a watch glass filled with water. The scars are readily visible with the naked eye in the family Cricetidae (includes mice and voles) but Bouins Solution, wintergreen oil, or diluted hydrogen perioxide must be used to clear the tract of larger rodents, such as chipmunks, which have thick uterine walls. The uterus is stretched to insure that all scars become visible, and a count is made and recorded on a standard data sheet (Figure 18). If the female is pregnant the number of fetuses will be counted and their age will be estimated to give the approximate time of conception.

Table 5. Approximate number of individuals of the three most common species being collected for laboratory analysis of reproductive effort and stomach contents within major vegetation types during each sampling period for the Rio Blanco Oil Shale Project.

	Number of Individuals for Each Species[1/]		
Vegetation Type	Least Chipmunk (*Eutamias minimus*)	Deer Mouse (*Peromyscus maniculatus*)	Montane Vole (*Microtus montanus*)
Aspen			5
Mixed brush	5	5	
Pinyon-juniper (southern slope)	5	5	
Pinyon-juniper (northern slope)	5	5	
Sagebrush	5	5	
Greasewood-Sagebrush	5	5	
Bottomland meadow	—	—	5
TOTAL	25	25	10

[1/] These species were selected because they are among the most abundant small mammal species in the vicinity of Tract C-a and are representative of three different groups of rodents (sciurids, cricetids, and microtines).

2.3.60

ECI
ecology consultants, inc.

REPRODUCTIVE STATUS DATA SHEET

Project__________________ Date________________ Investigator________________________

Location____________________________ Habitat_____________________________________

Capture Technique____

Comments____

Species______________________________________

							Embryos		Placental Scars		
	TL	T	HF	E	grams	Inactive	R	L	R	L	Comments
A											
B											
C											
D											
E											

Species______________________________________

							Embryos		Placental Scars		
	TL	T	HF	E	grams	Inactive	R	L	R	L	Comments
A											
B											
C											
D											
E											

Species______________________________________

							Embryos		Placental Scars		
	TL	T	HF	E	grams	Inactive	R	L	R	L	Comments
A											
B											
C											
D											
E											

Figure 18. Reproductive status data sheet for the Rio Blanco Oil Shale Project.

Laboratory Analysis of Stomach Contents

Basic dietary preferences or food niches of small mammal species have recently received attention by mammalogists, and literature is now available to support interpretation of trophic relationships of mammals within various plant communities. The International Biological Program's Grassland Biome work has provided recent data on small mammal diets through its Diet Laboratory in Fort Collins (see, for instance, Grant, 1972; Hansen and Moir, 1971; Flinders and Hansen, 1972). These data will be utilized whenever feasible to support interpretation of dietary habits and trophic level position of the small mammal species found on or near Tract C-a.

Stomach contents of animals are emptied into a Petri dish containing alcohol and examined under 30 x magnification through a dissecting stereoscope. The material within the dish is sufficiently agitated to insure randomization, the particle on or closest to an X marked in the center of the dish is characterized as to whether it is of arthropod, vertebrate or vegetal origin, and the data are recorded on data forms (Figure 19). Vegetation is being differentiated between seeds and succulent parts. A total of 50 particles is examined from each stomach.

Collection of Voucher Specimens

To confirm field identification and to provide evidence of species encountered during the baseline inventory, up to five voucher specimens of each small mammal species captured are being prepared. Voucher specimens, provided by both the removal and live trapping programs, are being processed and curated by ECI personnel and identifications checked by Dr. Robert B. Findley, a mammalogist with the National Fish and Wildlife Laboratory. Dr. Findley is presently involved in a study to determine the distribution of mammals in western Colorado, particularly the Piceance Basin, and is knowledgable of all small mammal species likely to occur in the area.

2.3.3.2.3. Pitfall Trapping

Pitfall traps for trap-shy animals and for animals not attracted to peanut butter bait are established in each major plant community on and

STOMACH ANALYS DATA SHEET

ecology co ltants, Inc.

Project__________ Date__________ Investigator__________

Location__________ Habitat__________

Capture Technique__________

Comments__________

Species__________

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1						11						21						31						41					
2						12						22						32						42					
3						13						23						33						43					
4						14						24						34						44					
5						15						25						35						45					
6						16						26						36						46					
7						17						27						37						47					
8						18						28						38						48					
9						19						29						39						49					
10						20						30						40						50					

Measurements							Food Categories				
	Sex	TL	T	HF	E	grams	–	V	I	Su	S
A											
B											
C											
D											
E											

Food Categories	Symbol	Total % F
Empty fields	–	
Vertebrate	V	
Invertebrate	I	
Succulent	Su	
Seed	S	

2.3.62

Figure 19. Stomach analysis data sheet for the Rio Blanco Oil Shale Project.

near Tract C-a (see Figure 14). The trap system consists of three plastic buckets, approximately the size of number 10 cans, placed in the ground open end up, flush with the ground surface and in a straight line. A 1-foot high drift fence (wire window screen) stretched over the center of the cans guides animals into the traps (Figure 20). A thin coating of glycerin is deposited on the bottom to minimize the possibility of small animals jumping out of the trap cans. Each set of pitfalls is operated for 4 days during each small mammal sampling period and is inspected daily for captures.

Species, sex, age, habitat type and pitfall location are recorded for each captured animal on a standard field data form (Figure 21). Up to five individuals of each species found dead in the traps are being prepared as voucher specimens, while live animals are released.

2.3.3.2.4. Night Spotlight Census

A night spotlight census route has been established to record activity, distribution and abundance of nocturnally active mammals, particularly rabbits, hares and predators. This census is being conducted on two clear nights during February, June, and October of each year along a 48.4 km (30 mi) route which traverses all major vegetation associations within and adjacent to Tract C-a (Figure 14). The route is driven at approximately 16.1 km (10 mi) per hour with an observer situated on the right top of the vehicle operating a spotlight. All mammals sighted within a strip up to 25 m (82 ft) wide on the right side of the vehicle are being recorded to species. Odometer readings to the nearest 0.16 km (0.1 mi) are recorded at the start of the census and each time a mammal is observed. Habitat is also noted. All data are recorded on a standard field data sheet (Figure 22).

Because of variations in topography and vegetation density it is not possible to census accurately all active mammals within a 25 m strip. To account for these variations, the census route is driven once during the evening when the "observable distance", up to 25 m, is determined. The portion of the survey route located in each vegetation type is determined to the nearest 0.1 m by direct measurement during the day. Multiplying width times length in each vegetation type provides an estimate of the total area sampled per type by the night spotlight census route. The number of animals sighted in each type, divided by the area of that type sampled, gives an estimate of density per unit area.

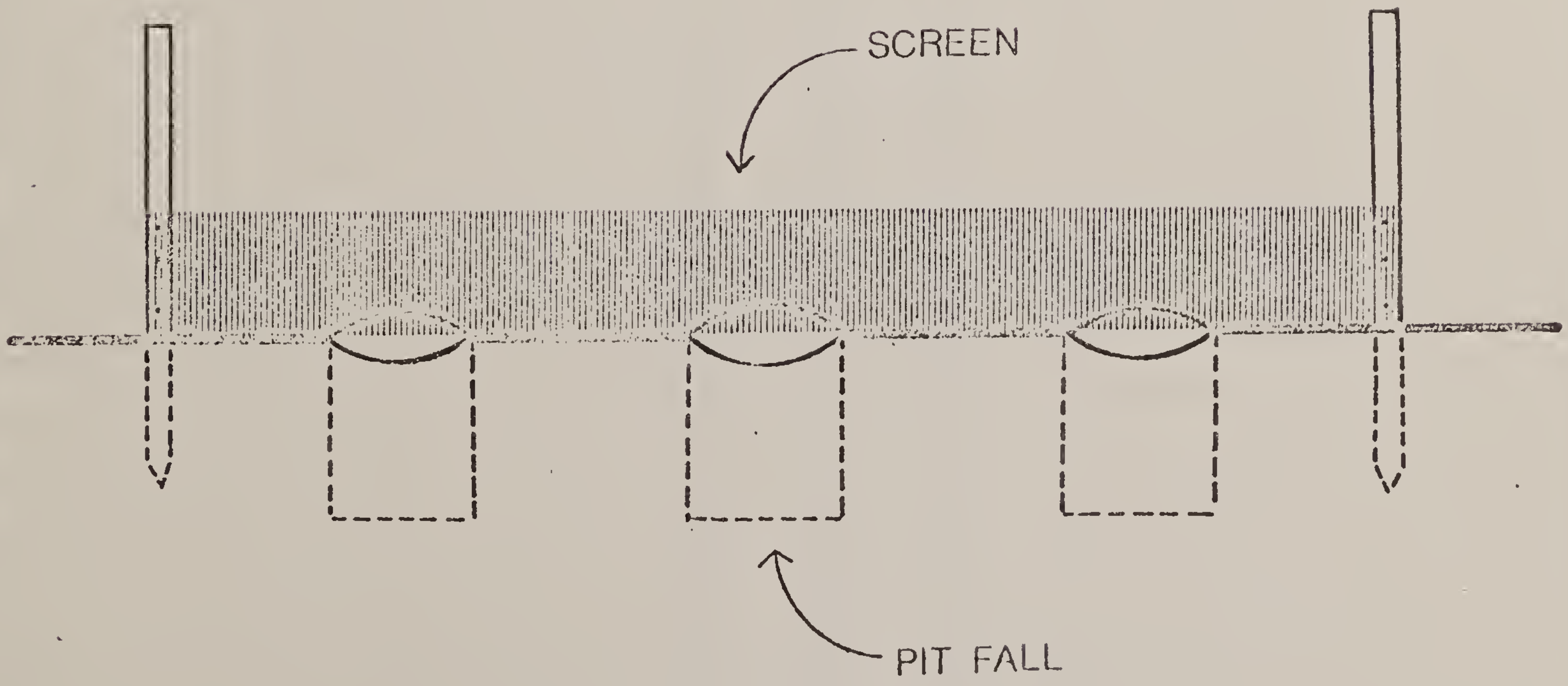


Figure 20. Typical pitfall can and drift fence arrangement used to capture trap-shy small mammals for Rio Blanco Oil Shale Project.

SMALL MAMMAL PITFALL FIELD DATA SHEET

2.3.65

fall Number________ Location________________________________

pling Period__________ Project Number________ Checked By____________________

e	Species	Sex	Age	Comments*

*Reproductive condition, diagnostic characters, future use of specimens, etc.

Figure 21. Small mammal pitfall field data sheet for the Rio Blanco Oil Shale Project.

ECI

ecology consultants, inc.

MAMMAL NIGHT ROAD CENSUS DATA AND SUMMARY SHEET 2.3.66

Project__________ Transect #__________ Date______________ Sunset Time__________

T[illegible] Begun__________ Temp.__________ Time Completed__________ Temp.________ Cloud Cover________%

Starting Point______________ Finish Point______________ Length of Transect______________

Observable Distance Estimates up to 25 meters.

Mile 1_____; 2_____; 3_____; 4_____; 5_____; 6_____; 7_____; 8_____; 9_____; 10_____;

11_____; 12_____; 13_____; 14_____; 15_____; 16_____; 17_____; 18_____; 19_____; 20_____;

21_____; 22_____; 23_____; 24_____; 25_____; 26_____; 27_____; 28_____; 29_____; 30_____.

Odometer Reading	Species Observed	Habitat	Odometer Reading	Species Observed	Habitat

1. $\overline{x}$ est. dist.________m. x transect length________m. = ________ sq. m. of coverage.

2. $\frac{\text{sq. m. coverage}}{\text{sq. m./hectare}} = \frac{______}{10{,}000} = $ ________ hectares; $N = \frac{\text{number sited}}{\text{total hectares}} = $ ________/hectare.

Species	No. Sighted	Hectares Covered	Pop. Est./Hectare

Figure 22. Mammal night road census data and summary sheet for the Rio Blanco Oil Shale Project.

2.3.3.2.5. Bat Investigations

During the summer months of June and August 1975 and 1976, ECI is to employ two techniques to determine the distribution and relative abundance of bat species within and adjacent to Tract Ca.

During daylight hours, old buildings, rock overhangs, crevices and other likely places are searched for roosting bats. Active bats in the vicinity of Tract Ca are sampled by mist netting. At dusk on four consecutive nights during the sampling periods, these nets are placed in a vertical position with the bottom shelf less than 0.3 m (1 ft) above ponds or water tanks which bats are visiting. Bats striking the net while sweeping low over the water to drink are captured in the pocket of the net. The mist net is examined as often as necessary through the night to prevent escape or death of captured bats. The first individual of each species captured is sacrificed and prepared as a voucher specimen. For subsequent captures, the species and sex of the animal, the date and location of sampling and the collector's name are recorded. The bat is then released.

2.3.3.3. RESULTS AND DISCUSSION

2.3.3.3.1. Live Trapping

Twenty separate locations were sampled by live trapping grids during October and December 1974. Grid locations represented a variety of different vegetation types, slope aspects and elevations (Table 4). Data were summarized to provide a preliminary view of the ecological distribution and relative abundance of trappable rodents captured during the two sampling periods.

Ten rodent species native to the Piceance Basin were represented in fall and winter live-trapping samples. These species and the total number of each captured during October and December 1974 sampling are presented in Table 6. Trapping results for each grid are summarized in Table 7.

The ecological distribution and abundance of each species, expressed in numbers of rodents captured per 100 trap nights for 15 selected areas are summarized in Table 8.

Table 6. Total number of all small mammal species captured on all live trapping grids for the Rio Blanco Oil Shale Project, October and December, 1974

Family Common name (Species)	Trapping Period 1 (October 19-24, 1974) Male	Female	Total	Trapping Period 2 (December 7-11, 1974) Male	Female	Total
Sciuridae (Squirrels, ground squirrels, chipmunks)						
Least chipmunk (*Eutamius minimus*)	216	189	406	1	0	1
Colorado chipmunk (*Eutamius quadrivittatus*)	21	24	45	3	0	3
Golden mantled ground squirrel (*Spermophilus lateralis*)	3	0	3	0	0	0
Cricetidae (New World mice and rats)						
Deer mouse (*Peromyscus maniculatus*)	226	214	440	96	70	166
Pinõn mouse (*Peromyscus truei*)	6	9	15	4	2	6
Bushy-tailed woodrat (*Neotoma cinera*)	1	6	7	0	0	0
Gapper's Red-backed vole (*Clethrionomys gapperi*)			22[1]			18[1]
Montane vole (*Microtus montanus*)	0	0	0			6[1]
Long-tailed vole (*Microtus longicaudus*)			36[1]			42[1]
Sagebrush vole (*Lagurus curtatus*)			8[1]			16[1]

---

[1] Unable to make positive determination of sex in the field.

Table 7. Number of individuals of each small mammal species captured on each live trapping grid for the Rio Blanco Oil Shale Project, during October and December, 1974

Grid Number - Vegetation Type Common name (Species)	Trapping Period 1 (October 19-24, 1974) Male	 Female	 Total	Trapping Period 2 (December 7-12, 1974) Male	 Female	 Total
1 Bottomland meadow						
Deer mouse (Peromyscus maniculatus)	3	13	16	22	12	34
Montane vole (*Microtus montanus*)	0	0	0			6[1/]
Sagebrush vole (*Lagurus curtatus*)			2[1/]			3[1/]
2 Pinyon-Juniper (western slope)						
Least chipmunk (*Eutamius minimus*)	3	1	4	0	0	0
Colorado chipmunk (*Eutamius quadrivittatus*)	2	2	4	0	0	0
Deer mouse (*Peromyscus maniculatus*)	8	5	13	6	1	7
Piñon mouse (*Peromyscus truei*)	2	2	4	0	1	1
3 Sagebrush						
Least chipmunk (*Eutamius minimus*)	6	4	10	0	0	0
Deer mouse (*Peromyscus maniculatus*)	2	6	8	4	1	5

Table 7. (Continued)

Grid Number - Vegetation Type Common name (Species)	Trapping Period 1 (October 19-24, 1974)			Trapping Period 2 (December 7-12 , 1974)		
	Male	Female	Total	Male	Female	Total
4 Pinyon-Juniper (southern slope)						
Least chipmunk (*Eutamius minimus*)	9	9	18	0	0	0
Colorado chipmunk (*Eutamius quadrivittatus*)	5	0	5	0	0	0
Deer mouse (*Peromyscus maniculatus*)	4	6	10	14	4	18
Piñon mouse (*Peromyscus truei*)	1	3	4	1	1	2
Long-tailed vole (*Microtus longicaudus*)	0	0	0			1[1/]
5 Greasewood/Sagebrush (flat)						
Least chipmunk (*Eutamius minimus*)	10	3	13	0	0	0
Deer mouse (*Peromyscus maniculatus*)	24	21	45	9	12	21
Long-tailed vole (*Microtus longicaudus*)			1[1/]			2[1/]
Sagebrush vole (*Lagurus curtatus*)	0	0	0			1[1/]
6 Pinyon-Juniper (northern slope)						
Least chipmunk (*Eutamius minimus*)	4	1	5	1	0	1

Table 7. (Continued)

Grid Number - Vegetation Type Common name (Species)	Trapping Period 1 (October 19-24, 1974) Male	Female	Total	Trapping Period 2 (December 7-12 , 1974) Male	Female	Total
6 Pinyon-Juniper (northern slope) (continued)						
Colorado chipmunk (*Eutamius quadrivittatus*)	3	2	5	3	0	3
Deer mouse (*Peromyscus maniculatus*)	5	2	7	1	0	1
Piñon mouse (*Peromyscus truei*)	0	1	1	0	0	0
7 Rabbitbrush						
Least chipmunk (*Eutamius minimus*)	6	19	25	0	0	0
Deer mouse (*Peromyscus maniculatus*)	8	5	13	10	12	22
Long-tailed vole (*Microtus longicaudus*)			1[1/]			5[1/]
8 Sagebrush (northern slope)						
Least chipmunk (*Eutamius minimus*)	14	1	15	0	0	0
Deer mouse (*Peromyscus maniculatus*)	13	14	27	2	3	5
Long-tailed vole (*Microtus longicaudus*)	0	0	0			1[1/]
Sagebrush vole (*Lagurus curtatus*)	0	0	0			1[1/]

Table 7. (Continued)

Grid Number - Vegetation Type Common name (Species)	Trapping Period 1 (October 19-24, 1974) Male	 Female	 Total	Trapping Period 2 (December 7-12, 1974) Male	 Female	 Total
9 Upland Meadow						
Least chipmunk (*Eutamius minimus*)	7	5	12	0	0	0
Deer mouse (*Peromyscus maniculatus*)	17	11	28	6	2	8
Long-tailed vole (*Microtus longicaudus*)	0	0	0			1[1]
Sagebrush vole (*Lagurus curtatus*)	0	0	0			2[1]
10 Pinyon-Juniper/Mixed brush (northern slope)						
Least chipmunk (*Eutamius minimus*)	11	5	16	0	0	0
Colorado chipmunk (*Eutamius quadrivittatus*)	2	3	5	0	0	0
Deer mouse (*Peromyscus maniculatus*)	15	4	19	3	1	4
11 Mixed Brush (northern slope)						
Least chipmunk (*Eutamius minimus*)	11	10	21	0	0	0
Deer mouse (*Peromyscus maniculatus*)	8	5	13	0	1	1
Sagebrush vole (*Lagurus curtatus*)	0	0	0			1[1]

Table 7. (Continued)

Grid Number - Vegetation Type Common name (Species)	Trapping Period 1 (October 19-24, 1974) Male	 Female	 Total	Trapping Period 2 (December 7-12, 1974) Male	 Female	 Total
12 Pinyon-Juniper/Sagebrush						
Least chipmunk (*Eutamius minimus*)	7	5	12	0	0	0
Deer mouse (*Peromyscus maniculatus*)	4	4	8	3	7	10
13 Upland meadow						
Least chipmunk (*Eutamius minimus*)	1	0	1	0	0	0
Deer mouse (*Peromyscus maniculatus*)	4	4	8	0	0	0
Greasewood/Sagebrush						
Least chipmunk (*Eutamius minimus*)	34	29	63	0	0	0
Deer mouse (*Peromyscus maniculatus*)	35	32	68	9	6	15
Long-tailed vole (*Microtus longicaudus*)			16[1]			7[1]
Pinyon-Juniper (southern slope)						
Least chipmunk (*Eutamius minimus*)	25	31	56	0	0	0
Colorado chipmunk (*Eutamius quadrivittatus*)	4	7	11	0	0	0
Deer mouse (*Peromyscus maniculatus*)	15	17	32	6	7	13

Table 7. (Continued)

Grid Number - Vegetation Type Common name (Species)	Trapping Period 1 (October 19-24, 1974) Male	 Female	 Total	Trapping Period 2 (December 7-12, 1974) Male	 Female	 Total
C Pinyon-Juniper (southern slope) (continued)						
Piñon mouse (*Peromyscus truei*)	2	1	3	2	0	2
Bushy-tailed woodrat (*Neotoma cinerea*)	0	5	5	0	0	0
D Pinyon-Juniper (northern slope)						
Least chipmunk (*Eutamius minimus*)	17	14	31	0	0	0
Colorado chipmunk (*Eutamius quadrivittatus*)	5	10	15	0	0	0
Golden-mantled ground squirrel (*Spermophilus lateralis*)	1	0	1	0	0	0
Deer mouse (*Peromyscus maniculatus*)	26	24	50	0	1	1
Piñon mouse (*Peromyscus truei*)	1	2	3	1	0	1
Bushy-tailed woodrat (*Neotoma cinerea*)	1	0	1	0	0	0
Sagebrush vole (*Lagurus curtatus*)			1[1/]	0	0	0
E Sagebrush (northern slope)						
Least chipmunk (*Eutamius minimus*)	27	24	51	0	0	0

Table 7. (Continued)

Grid Number - Vegetation Type Common name (Species)	Trapping Period 1 (October 19-24, 1974) Male	 Female	 Total	Trapping Period 2 (December 7-12, 1974) Male	 Female	 Total
E Sagebrush (northern slope) (continued)						
Golden-mantled ground squirrel (*Spermophilus lateralis*)	2	0	2	0	0	0
Deer mouse (*Peromyscus maniculatus*)	20	25	45	0	0	0
Bushy-tailed woodrat (*Neotoma cinerea*)	0	1	1	0	0	0
Sagebrush vole (*Lagurus curtatus*)			3[1/]			2[1/]
F Mixed brush (southern slope)						
Least chipmunk (*Eutamius minimus*)	18	18	36	0	0	0
Deer mouse (*Peromyscus maniculatus*)	11	4	15	0	0	0
Gapper's Red-backed vole (*Clethrionomys gapperi*)			2[1/]	0	0	0
Sagebrush vole (*Lagurus curtatus*)			2[1/]	0	0	0
G Douglas fir (northern slope)						
Deer mouse (*Peromyscus maniculatus*)	1	2	3	1	0	1
Gapper's Red-backed vole (*Clethrionomys gapperi*)			18[1/]			12[1/]

Table 7. (Continued)

Grid Number - Vegetation Type Common name (Species)	Trapping Period 1 (October 19-24, 1974)			Trapping Period 2 (December 7-12, 1974)		
	Male	Female	Total	Male	Female	Total
H Aspen (northern slope)						
Least chipmunk (*Eutamius minimus*)	6	10	16	0	0	0
Deer mouse (*Peromyscus maniculatus*)	2	0	2	0	0	0
Gapper's Red-backed vole (*Clethrionomys gapperi*)			2[1/]			6[1/]
Long-tailed vole (*Microtus longicaudus*)			18[1/]			25[1/]

[1/] Unable to make positive determination of sex in the field.

Table 8. Ecological distribution and abundance (animals/100 trap nights) of trappable rodents captured on live trapping grids for the Rio Blanco Oil Shale Project, October and December, 1974

Habitat Type (Aspect/Elevation)	Trap Nights		Peromyscus maniculatus		Microtus montanus		Clethrionomys gapperi		Lagurus curtatus		Microtus longicaudus		Peromyscus truei	
	Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter
Greasewood-Sagebrush (Flat/6500')	830	330	13.6	10.9	0	0	0	0	0	0.3	2.1	2.7	0	0
Sagebrush (Northern slope/7200'-7500')	830	330	8.7	1.5	0	0	0	0	0.4	0.9	0	0.3	0	0
Sagebrush (Flat/6000')	165	165	4.8	3.0	0	0	0	0	0	0	0	0	0	0
Mixed Brush (Southern slope/8000')	665	165	2.3	0	0	0	0.3	0	0.3	0	0	0	0	0
Mixed Brush (Northern slope/7000')	165	165	7.9	0.6	0	0	0	0	0	0.6	0	0	0	0
Bottomland Meadow (Flat/6000')	165	165	9.7	20.1	0	3.6	0	0	1.2	1.8	0	0	0	0
Upland Meadow (Flat/7500'-8200')	330	330	10.9	2.4	0	0	0	0	0	0.6	0	0.3	0	0
Douglas Fir (Northern slope/8200')	165	165	1.8	0.6	0	0	10.9	7.3	0	0	0	0	0	0
Aspen (Northern slope/8200')	165	165	1.2	0	0	0	1.2	3.6	0	0	10.9	15.2	0	0
Pinyon-Juniper (Southern slope/6500')	830	330	5.0	9.4	0	0	0	0	0	0	0	0.3	0.8	1.2
Pinyon-Juniper (Northern slope/6800')	830	330	6.9	0.6	0	0	0	0	0.1	0	0	0	0.5	0.3
Pinyon-Juniper (Western slope/6800')	165	165	7.9	4.2	0	0	0	0	0	0	0	0	2.4	0.6
Pinyon-Juniper/Mixed Brush (Northern slope/6900')	165	165	11.5	2.4	0	0	0	0	0	0	0	0	0	0
Pinyon-Juniper/Sagebrush (Flat/7400')	165	165	4.8	6.0	0	0	0	0	0	0	0	0	0	0
Rabbitbrush (Flat/6500')	165	165	7.9	13.3	0	0	0	0	0	0	0.6	3.0	0	0

Table 8. (Continued)

Habitat Type (Aspect/Elevation)	Trap Nights Fall Winter	Eutamias quadrivittatus		Eutamias minimus		Neotoma cinerea		Spermophilus lateralis		Total Fall	Total Winter
		Fall	Winter	Fall	Winter	Fall	Winter	Fall	Winter		
Greasewood-Sagebrush (Flat/6500')	830 330	0	0	9.2	0	0	0	0	0	24.9	13.9
Sagebrush (Northern slope/7200'-7500')	830 330	0	0	8.0	0	0.1	0	0.2	0	17.4	2.7
Sagebrush (Flat/6000')	165 165	0	0	6.0	0	0	0	0	0	10.8	1.5
Mixed Brush (Southern slope/8000')	665 165	0	0	5.6	0	0	0	0	0	8.5	0
Mixed Brush (Northern slope/7000')	165 165	0	0	12.7	0	0	0	0	0	20.6	1.2
Bottomland Meadow (Flat/6000')	165 165	0	0	0	0	0	0	0	0	10.9	24.2
Upland Meadow (Flat/7500'-8200')	330 330	0	0	3.9	0	0	0	0	0	14.8	3.3
Douglas Fir (Northern slope/8200')	165 165	0	0	0	0	0	0	0	0	12.7	7.9
Aspen (Northern slope/8200')	165 165	0	0	9.7	0	0	0	0	0	23.0	18.8
Pinyon-Juniper (Southern slope/6500')	830 330	1.9	0	8.9	0	0.6	0	0	0	17.2	10.9
Pinyon-Juniper (Northern slope/6800')	830 330	2.4	0.9	4.3	0.3	0.1	0	0.1	0	14.4	2.1
Pinyon-Juniper (Western slope/6800')	165 165	2.4	0	2.4	0	0	0	0	0	15.1	1.0
Pinyon-Juniper/Mixed Brush (Northern slope/6900')	165 165	3.0	0	9.7	0	0	0	0	0	24.2	0.2
Pinyon-Juniper/Sagebrush (Flat/7400')	165 165	0	0	7.3	0	0	0	0	0	18.2	6.0
Rabbitbrush (Flat/6500')	165 165	0	0	15.1	0	0	0	0	0	23.6	16.3

The paucity of small mammal data gathered in the field during only two sampling periods prohibits the formulation of definitive conclusions. Therefore, summarized field data gathered during fall and winter sampling have been compared to those data presented in the available literature in attempts to qualify our findings to date. Comparisons of our limited data to those in the literature enable us to predict certain expected trends, such as the ecological distribution and species diversity of small mammals in the area of investigation. Increasing small mammal data base resulting from future trapping efforts in the Piceance Basin should confirm many of the preliminary interpretations presented in this report.

The deer mouse (Peromyscus maniculatus) was present in all habitat types sampled. This species was relatively common (4.8 to 13.6 mice/100 trap nights) in the fall in all vegetation types below 8000 ft elevation and relatively abundant in greasewood-sagebrush (flat areas with an elevation of 6500 ft) and pinyon-juniper/mixed brush (north slope with an elevation of 6900 ft). Brown (1967) found P. maniculatus to be abundant in sagebrush and mountain mahogany communities in southeastern Wyoming. He suggested that these vegetation types produce large quantities of seeds suitable for comsumption by deer mice. Larrison and Johnson (1973) reported deer mice to be the most abundant rodent in disturbed sagebrush and shadscale communities in Idaho. P. maniculatus was relatively scarce or absent from high elevation mixed brush, Douglas fir and aspen types during both fall and winter sampling, but was relatively abundant (20.1 mice/100 trap nights) in the bottomland meadow (flat area with an elevation of 6000 ft) during winter sampling. P. maniculatus commonly occurs at all elevations in Colorado, from low meadows to alpine tundra (Warren, 1942) and is the most abundant of all Colorado mammals (Armstrong, 1972). Williams (1955), in surveying mice and shrew distribution in central Colorado during the summer, found P. maniculatus to be common in all montane communities sampled (above 8700 ft elevation), and most abundant on disturbed areas, some of which were above 9600 ft elevation. Brown (1967) rarely captured deer mice in spruce-fir forests but found them common in aspen stands in the Medicine Bow Mountains of Wyoming. It is likely that summer sampling in the Piceance Basin will yield a higher capture success for P. maniculatus at the high altitude trapping sites.

The montane vole (Microtus montanus) did not appear in any vegetation type during fall sampling, and was captured in low numbers (3.6 voles/100 trap nights) only in the bottomland meadow during winter. This species was not taken in any other vegetation type. The altitudinal range of M. montanus in Colorado is from 6000 ft to above timberline, but this species prefers grassy meadows and other areas of dense ground cover such as those found in aspen stands (Armstrong, 1972). Williams (1955) captured montane voles in stream bottom and grazed meadow communities in central Colorado. Brown (1967) likewise found M. montanus to be common in grassy meadow situations in southeastern Wyoming.

The red-backed vole (Clethrionomys gapperi) was relatively abundant in the Douglas fir vegetation type during the fall and winter sampling periods (10.9 and 7.3 mice/100 trap nights respectively). This species was present, but infrequently taken in aspen and high elevation mixed brush. Clethrionomys gapperi was not captured in vegetation types below 8000 ft elevation. Warren (1942) reported that C. gapperi rarely occurs below 8000 ft elevation and Armstrong (1972) stated that this boreal forest species is usually confined to well developed coniferous zones from 8000 to 11,000 ft in Colorado. Williams (1955) found C. gapperi to be abundant in lodgepole pine forests in central Colorado and Brown (1967) reported this species to be very numerous in spruce-fir forests, common in lodgepole pine and present, but in fewer numbers, in aspen in southeastern Wyoming.

The sagebrush vole (Lagurus curtatus) was captured in seven different vegetation types but was only taken in bottomland meadow with any regularity. This trap shy species was taken in such small numbers in other vegetation types (greasewood-sagebrush, sagebrush, mixed brush, upland meadow, and pinyon-juniper) that preliminary conclusions concerning its habitat distribution and abundance are somewhat tentative. Sagebrush voles are usually associated with arid situations in Colorado (Lechleitner, 1969) and are generally limited to stands of sagebrush (Artemisia) mixed with other shrubs up to 9000 ft elevation in Rio Blanco County (Armstrong, 1972). Larrison and Johnson (1973) found L. curtatus to be present in small numbers in sagebrush and crested wheatgrass communities in Idaho. Continued trapping efforts should more clearly elucidate the habitat preferences of L. curtatus in the Piceance Basin.

The long-tailed vole (*Microtus longicaudus*) was relatively abundant (10.9 and 15.2 voles/100 trap nights) in aspen during the fall and winter sampling periods respectively. The long-tailed vole was present, but in fewer numbers in both greasewood-sagebrush and rabbitbrush during both fall and winter trapping periods. This species was also taken in small numbers in sagebrush, upland meadow, and pinyon-juniper vegetation types during the winter trapping period. *M. longicaudus* inhabits a variety of vegetation types in Colorado, from wet to dry meadow, rocky slopes (Warren, 1942), and has a wide altitudinal range, from below 5000 ft to above timberline in western Colorado (Armstrong, 1972). Durrant and Robinson (1962) found this species to be common in brushy meadows with a sparse herbaceous stratum in southwestern Colorado, suggesting that the long-tailed vole is not as dependent on dense ground cover as is *Microtus montanus*. Brown (1967) found the long-tailed vole to be common in meadow and bog situations and aspen forests but absent from sagebrush and mountain mahogany communities in southeastern Wyoming.

The piñon mouse (*Peromyscus truei*) was not captured in large numbers during either sampling period, but this species did appear with some regularity in three pinyon-juniper stands (south, west, and north slopes) below 6900 ft elevation. The piñon mouse was not captured in the two pinyon-juniper sample sites above 6900 ft, or in any other vegetation type. In Colorado, this species is common only in pinyon-juniper below 7000 ft elevation (Lechleitner, 1969) but has been reported as an uncommon occurrence in pinyon-juniper up to 8500 ft elevation in western Colorado (Armstrong, 1972). *Peramyscus truei* is generally restricted to pinyon-juniper woodlands because it is dependent on the juniper for nesting sites and juniper berries as its preferred winter food (Douglas, 1969).

The Colorado chipmunk (*Eutamias quadrivittatus*) was captured in small numbers at all pinyon-juniper trapping grids below 6900 ft elevation. This species was not taken in the pinyon-juniper sample site at 7400 ft elevation, or in any other vegetation type. The Colorado chipmunk was not captured with any regularity during the winter sampling period probably because it had

entered a period of winter inactivity. _E. quadrivittatus_ inhabits forested and brushy areas in Colorado and is particularly fond of rocky ground (Warren, 1942). Williams (1955) captured this species in a stream bottom community above 8700 ft elevation in central Colorado and Armstrong (1972) reported that the Colorado chipmunk can range from 4200 ft to 10,500 ft elevation and typically inhabits areas of broken rocks and open coniferous woodland.

The least chipmunk (_Eutamias minimus_) was regularly captured at all elevations in all vegetation types, except bottomland meadow and Douglas fir, during fall sampling. This species was relatively abundant in rabbitbrush and mixed brush communities and was also captured in large numbers in greasewood-sagebrush, sagebrush, aspen and pinyon-juniper types. _E. minimus_ was relatively common, in upland meadow and pinyon-juniper above 6800 ft elevation. The least chipmunk ranges from 6000 ft to 12,000 ft in western Colorado and utilizes a variety of habitats from sagebrush plains to coniferous forests (Lechleitner, 1969). _E. minimus_ is the most abundant Colorado sciurid and has the widest ecological range of any sciurid in the state. This species, however, is rarely seen in dense unbroken forest (Armstrong, 1972) which might explain why it was not taken in the Douglas fir type sampled. In sharp contrast to the fall sample period, only one least chipmunk was captured during winter sampling and this was at a pinyon-juniper trapping grid. The least chipmunk is not a true hibernator, but does enter periods of torpidity during cold weather and is generally inactive through the winter (Lechleitner, 1969).

Trapping success was greatly reduced during the winter sampling period in all vegetation types except the bottomland meadow, where trap success was higher than it was during fall sampling. The almost complete absence of _E. minimus_, a major constituent of fall samples, is partially responsible for the reduced winter trap success.

The different vegetation types sampled varied considerably in terms of the total number of rodents captured per 100 trap nights. Greasewood-sage, aspen, and rabbitbrush vegetation types were the most productive during both fall and winter sampling periods. Eutamias minimus and Peromyscus maniculatus accounted for about 86.0% of all rodents captured in the greasewood-sage and rabbitbrush during fall and winter, while Microtus sp. and E. minimus comprised 85.6% of the rodents captured in the aspen during fall and winter. Mixed brush and pinyon-juniper/sagebrush communities yielded relatively large numbers of trappable rodents during the fall sampling period but not during winter. Eutamias minimus was common in both these vegetation types during fall but absent from winter samples resulting in an overall decline in winter trap success in these plant communities. The bottomland meadow grid demonstrated the highest trap success during winter sampling when P. maniculatus was captured in large numbers. This sharp increase in trap success over the fall sampling period may be related to the availability of natural food and the altitudinal position of the bottomland meadow grid. An abundant natural food supply during fall sampling would have reduced the response to trap baits and, therefore, reduced trap success; however, as this food supply dwindled with the approach of winter, animals would have been more easily attracted to the bait. In addition, the low elevation of this grid may have permitted some small mammal species to be more active later into the cold season than would be possible at higher elevation grids. A combination of these two factors may have been responsible for the increased winter trap success in the bottomland meadow.

Sagebrush (flat areas at an elevation of 6000 ft) and mixed brush (south slope at an elevation of 8000 ft) demonstrated the lowest trap success during both winter and fall sampling.

The greatest number of different rodent species was recorded for the sagebrush communities - north slope at an elevation of 7200 ft (6 species total), pinyon-juniper - south slope at an elevation of 6500 ft (6 species total), and pinyon-juniper - north slope at an elevation of 6800 ft (7 species total). Only two different rodent species were recorded for sagebrush communities (flat areas at 6000 ft elevation), Douglas fir (north slope at 8200 ft elevation), and pinyon-juniper/sagebrush (flat areas at 7400 ft elevation).

The different vegetation types sampled varied considerably in terms of the total number of rodents captured per 100 trap nights. Greasewood-sage, aspen, and rabbitbrush vegetation types were the most productive during both fall and winter sampling periods. Eutamias minimus and Peromyscus maniculatus accounted for about 86.0% of all rodents captured in the greasewood-sage and rabbitbrush during fall and winter, while Microtus sp. and E. minimus comprised 85.6% of the rodents captured in the aspen during fall and winter. Mixed brush and pinyon-juniper/sagebrush communities yielded relatively large numbers of trappable rodents during the fall sampling period but not during winter. Eutamias minimus was common in both these vegetation types during fall but absent from winter samples resulting in an overall decline in winter trap success in these plant communities. The bottomland meadow grid demonstrated the highest trap success during winter sampling when P. maniculatus was captured in large numbers. This sharp increase in trap success over the fall sampling period may be related to the availability of natural food and the altitudinal position of the bottomland meadow grid. An abundant natural food supply during fall sampling would have reduced the response to trap baits and, therefore, reduced trap success; however, as this food supply dwindled with the approach of winter, animals would have been more easily attracted to the bait. In addition, the low elevation of this grid may have permitted some small mammal species to be more active later into the cold season than would be possible at higher elevation grids. A combination of these two factors may have been responsible for the increased winter trap success in the bottomland meadow.

Sagebrush (flat areas at an elevation of 6000 ft) and mixed brush (south slope at an elevation of 8000 ft) demonstrated the lowest trap success during both winter and fall sampling.

The greatest number of different rodent species was recorded for the sagebrush communities - north slope at an elevation of 7200 ft (6 species total), pinyon-juniper - south slope at an elevation of 6500 ft (6 species total), and pinyon-juniper - north slope at an elevation of 6800 ft (7 species total). Only two different rodent species were recorded for sagebrush communities (flat areas at 6000 ft elevation), Douglas fir (north slope at 8200 ft elevation), and pinyon-juniper/sagebrush (flat areas at 7400 ft elevation).

2.3.3.3.2. Laboratory Studies

Small mammal specimens for the analysis of stomach contents were to be collected in October and December 1974. The delay in initiating the terrestrial baseline data collection program together with the concern for the safety of ECI field personnel during the October mule deer hunting season forced postponement of the October specimen collection until November 9-14. The December removal trapping occurred on schedule during December 7-11, 1974.

During both sampling periods a total of 60 specimens of three different species in seven different vegetation types was to be collected (Table 5). Although sampling intensity was increased in all areas sampled, unfavorable weather conditions and the corresponding decreased small mammal activity resulted in only 20 and 8 specimens of two species being collected for the November and December sampling periods respectively. The results of the stomach analyses are summarized in Tables 9 to 14.

During the winter months, the diet of foraging small mammals is limited by food availability. Since succulent vegetation parts and invertebrates are for the most part unavailable, seeds tend to comprise the largest percentage of the winter diet. This is evidenced by the stomach analysis results for the deer mouse (Peromyscus maniculatus) and the least chipmunk (Eutamias minimus) captured in the vicinity of Tract C-a for November and December. In all four vegetation types where these species were collected, seeds made up at least 67% of the total diet.

The montane vole (Microtus montanus), however, showed a preference for succulent parts in the two vegetation types where it was collected. This could represent either a marked preference for succulent parts or increased availability of this food type in the vegetation associations where the montane vole was collected. The second hypothesis seems to be discounted, however, by the fact that deer mice collected in the greasewood-sagebrush with the voles revealed a larger percentage of seeds in their diet. In any case, the sample size is too small and the resulting data too incomplete at this time to warrant any definite conclusions concerning small mammal food habits in the

Table 9. Stomach contents of the montane vole (*Microtus montanus*) captured in bottomland meadow habitat for the Rio Blanco Oil Shale Project, November, 1974

Species	Stomach Contents (% diet composition)				
	Seed	Succulent	Vertebrate	Invertebrate	Empty Field
Microtus montanus #1	6%	86%	0%	0%	8%
Microtus montanus #2	28%	70%	0%	2%	0%
Microtus montanus #3	16%	80%	0%	4%	0%
AVERAGE % Composition	16.7%	78.6%	0%	2.0%	2.6%

Table 10. Stomach contents of the deer mouse (*Peromyscus maniculatus*) and montane vole (*Microtus montanus*) captured in greasewood-sagebrush habitat for the Rio Blanco Oil Shale Project, November, 1974

Species	Stomach Contents (% diet composition)				
	Seed	Succulent	Vertebrate	Invertebrate	Empty Field
Peromyscus maniculatus #1	74%	12%	0%	0%	14%
Peromyscus maniculatus #2	78%	8%	0%	0%	14%
Peromyscus maniculatus #3	90%	6%	0%	2%	2%
Peromyscus maniculatus #4	82%	8%	6%	2%	2%
Peromyscus maniculatus #5	86%	6%	4%	0%	4%
AVERAGE % Composition	82.0%	8.0%	2.0%	0.8%	7.2%
Microtus montanus #1	4%	94%	2%	0%	0%
Microtus montanus #2	88%	10%	0%	0%	2%
AVERAGE % Composition	46.0%	52.0%	1.0%	0.0%	1.0%

Table 11. Stomach contents of the deer mouse (*Peromyscus maniculatus*) captured in pinyon-juniper (southern slope) habitat for the Rio Blanco Oil Shale Project, November, 1974

	Stomach Contents (% diet composition)				
Species	Seed	Succulent	Vertebrate	Invertebrate	Empty Field
Peromyscus maniculatus #1	66%	22%	2%	2%	8%
Peromyscus maniculatus #2	82%	14%	0%	0%	4%
Peromyscus maniculatus #3	58%	24%	2%	0%	16%
Peromyscus maniculatus #4	92%	6%	0%	0%	2%
Peromyscus maniculatus #5	70%	6%	0%	18%	6%
AVERAGE % Composition	73.6%	14.4%	0.8%	4.0%	7.2%

Table 12. Stomach contents of the deer mouse (Peromyscus maniculatus) captured in sagebrush habitat for the Rio Blanco Oil Shale Project, November, 1974

Species	Stomach Contents (% diet composition)				
	Seed	Succulent	Vertebrate	Invertebrate	Empty Field
Peromyscus maniculatus #1	66%	26%	2%	2%	4%
Peromyscus maniculatus #2	60%	40%	0%	0%	0%
Peromyscus maniculatus #3	70%	22%	0%	0%	8%
Peromyscus maniculatus #4	72%	20%	0%	0%	8%
Peromyscus maniculatus #5	68%	14%	2%	0%	16%
AVERAGE % Composition	67.2%	24.4%	0.8%	0.4%	7.2%

Table 13. Stomach contents of the deer mouse (Peromyscus maniculatus) captured in greasewood-sagebrush habitat for the Rio Blanco Oil Shale Project, December, 1974

Species	Stomach Contents (% diet composition)				
	Seed	Succulent	Vertebrate	Invertebrate	Empty Field
Peromyscus maniculatus #1	80%	10%	6%	2%	2%
Peromyscus maniculatus #2	88%	0%	10%	0%	2%
Peromyscus maniculatus #3	94%	2%	4%	0%	0%
Peromyscus maniculatus #4	48%	46%	0%	0%	6%
Peromyscus maniculatus #5	74%	6%	4%	8%	8%
AVERAGE % Composition	76.8%	12.8%	4.8%	2.0%	3.6%

Table 14. Stomach contents of the deer mouse (Peromyscus maniculatus) and the least chipmunk (Eutamias minimus) captured in pinyon-juniper (southern slope) habitat for the Rio Blanco Oil Shale Project, December, 1974

	Stomach Contents (% diet composition)				
Species	Seed	Succulent	Vertebrate	Invertebrate	Empty Field
Peromyscus maniculatus #1	88%	6%	4%	0%	2%
Peromyscus maniculatus #2	76%	10%	2%	12%	0%
AVERAGE % Composition	82.0%	8.0%	3.0%	6.0%	1.0%
Eutamias minimus	84%	0%	2%	0%	14%

vicinity of Tract C-a. Further investigations and literature search should permit a detailed description of small mammal food preferences and a determination of species differences within similar vegetation types as well as differences between different types for the same species.

2.3.3.3.3. Pitfall Trapping

Pitfall traps were established in six locations each in a different vegetation type, and were operated from October 21 to October 24, 1974 and again from December 9 to December 12, 1974. Any species documented by live trapping in the same vegetation type were not recorded.

In October, three shrews were trapped in two locations. A masked shrew (Sorex cinereus) was trapped in the greasewood-sagebrush habitat. A masked shrew and a Merriam's shrew (S. merriami) were trapped in the sagebrush habitat. In December, two masked shrews were trapped, both in the greasewood-sagebrush habitat.

The Merriam's shrew has never been reported from this area prior to this capture. According to Lechleitner (1969) and Armstrong (1972) little is known of the habits of this shrew and nowhere does it seem to be abundant. The masked shrew is relatively abundant in Colorado and is to be expected in moister habitats (Armstrong, 1972).

2.3.3.3.4. Night Spotlight Census

The night spotlight census was conducted on the nights of November 11 and 13, 1974 and February 10 and 12, 1975. This method designed to census nocturnally active animals, especially lagomorphs, has proven valuable in shortgrass plains situations but is not entirely viable in the Piceance Basin because of the dense vegetation and varied topography which reduce visibility. The results of the two census periods are given in Table 15.

The presence of two species of lagomorphs was documented on or near Tract C-a. The white-tailed jackrabbit (Lepus townsendii) was easily identified by field observation but the cottontail (Sylvilagus sp.) is much more difficult to distinguish to species. A specimen was collected by ECI personnel and identified by Dr. Robert B. Findley of the National Fish and Wildlife Laboratory

Table 15. Results of the night spotlight censuses conducted November 11 and 13, 1974 and February 10 and 12, 1975 for the Rio Blanco Oil Shale Project

Species	November 11 and 13, 1974		
	Number Sighted	Hectares Covered	Pop. Est./Hectare
Cottontail (*Sylvilagus* sp.)	3	68.35	0.04
White-tailed jackrabbit (*Lepus townsendii*)	1	68.35	0.01

February 10 and 12, 1974

There were no lagomorphs encountered during this sampling period.

as a Nuttall's cottontail (Sylvilagus nuttallii). However, it is possible that more than one species of cottontail resides in the study area. As evidenced by the results, species of all lagomorphs in the vicinity of Tract C-a are currently at a low population level.

2.3.3.4. SUMMARY AND CONCLUSIONS

2.3.3.4.1. Live Trapping

Small mammals were sampled at eleven different vegetation types in 20 separate locations during October and December, 1974. Data have been summarized, compared to the available literature and tentatively interpreted.

Ten different trappable rodent species were recorded for fall and winter samples at the 20 live-trap grids. The deer mouse (Peromyscus maniculatus) and the least chipmunk (Eutamias minimus) exhibited the widest ecological range and the greatest relative abundance of any of the rodents captured. The deer mouse regularly appeared in samples from all vegetation types and the least chipmunk was captured in all but two vegetation types. The red-backed vole (Clethrionomys gapperi), piñon mouse (Peromyscus truei) and Colorado chipmunk (Eutamias quadrivittatus) seemed to show definite habitat preferences. The red-backed vole appeared only in Douglas fir and aspen with any regularity while the pinyon mouse and the Colorado chipmunk were taken only in pinyon-juniper. Future trapping efforts should confirm these preliminary findings and more clearly elucidate the habitat preferences and ecological distribution of other trappable small mammal species in the area of investigation.

The sharp decline in the numbers of small rodents captured during the winter trapping period resulted in part from the almost complete absence of the least chipmunk (a major constituent of fall samples). Other small mammal species were probably less active and less abundant during the winter sampling period and were therefore more difficult to capture.

The greatest number of different rodent species was recorded for sagebrush and pinyon-juniper vegetation types.

2.3.3.4.2. Laboratory Analysis of Stomach Contents

Unfavorable weather conditions and reduced small mammal activity resulted in only 20 and 8 small mammal specimens (far below the desired sample size) being collected for stomach analysis during November and December, 1974 respectively. The results of the analysis indicated that seeds comprise at least 67% of the total diet of the deer mouse and the least chipmunk during the winter while succulent vegetation parts appear to be the desired food of the montane vole. However, the data are insufficient to permit the formulation of firm conclusions concerning small mammal food preferences in the vicinity of Tract C-a at this time.

2.3.3.4.3. Pitfall Trapping

Pitfall trapping was conducted within six different vegetation types during October 21-24 and December 9-12, 1974. Two shrew species, masked shrew (*Sorex cinereus*) and Merriam's shrew (*S. merriami*) were documented. The latter species had never been reported in the area prior to this investigation (Armstrong, 1972; Lechleitner, 1969).

2.3.3.4.4. Night Spotlight Census

Night spotlight censuses were conducted on November 11 and 13, 1974 and February 10 and 12, 1975. At least two species of lagomorphs, the white-tailed jackrabbit (*Lepus townsendii*) and the cottontail (*Sylvilagus* sp.) were observed during the censuses. Population densities of all lagomorph species are presently low.

Rio Blanco
Oil Shale Project

SECOND QUARTERLY DATA REPORT

OCT, NOV, DEC, JAN & FEB
FALL & WINTER 1974 -75
BOOK 6 OF 11

TERRESTRIAL STUDIES (RAW DATA)

Gulf Oil Corporation
and
Standard Oil Company (Indiana)
9725 East Hampden Avenue, Denver, Colorado 80231

2. 3. 3.

II. SMALL MAMMALS

A. Live Trapping

GRID AND FILE NUMBER

Grid 1 - Bottomland Meadow[1] (5.1.2.1)
Grid 2 - Cath Road P-J (5.1.2.2)
Grid 3 - Boot Hill Sage (5.1.2.3)
Grid 4 - Cliff P-J (5.1.2.4)
Grid 5 - Boxelder Bottom (5.1.2.5)
Grid 6 - Gas Line P-J (5.1.2.6)
Grid 7 - Rabbitbrush (5.1.2.7)
Grid 8 - Remark Sage (5.1.2.8)
Grid 9 - Upland Meadow (5.1.2.9)
Grid 10 - Tower P-J/Brush (5.1.2.10)
Grid 11 - Tract Mtn Brush (5.1.2.11)
Grid 12 - Horse P-J/Sage (5.1.2.12)
Grid 13 - Ridgetop Meadow (5.1.2.13)
Grid 14 - Greasewood-Sage (5.1.2.14)
Grid 15 - South P-J (5.1.2.15)
Grid 16 - Hunting Club P-J (5.1.2.16)
Grid 17 - Sage (5.1.2.17)
Grid 18 - Mountain Brush (5.1.2.18)
Grid 19 - Douglas Fir (5.1.2.19)
Grid 20 - Aspen (5.1.2.20)

B. Removal Trapping (5.2.2.1)

C. Distribution Records (14.1.1)

Grid 1 - Bottomland Meadow (5.1.2.1)

3.7.2.7-7

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ation: [illegible] Meadow Grid #: 1 Trap Night: 1 Checked By: JC, JB

e, Time Traps Set: 12:00 10/19 Date, Time Traps Checked: 12:00 11/20

ne :	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
5		P.man	F	SA		6103			tail < body
10		Pman	F	SA		0104			Same thing [illegible]
~~4~~		~~Otocoltas hirsinu~~	~~\~~	~~–~~					
2		P. man	F	A		0001			
		Vole L. curtatus	–	–		0002	✓		KEPT FOR I.D.

*agnostic characters, parasites, etc.

5.1.2.1-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Potterland Meadows Grid #: 1 Trap Night: 2 Checked By: JB, JC

ate, Time Traps Set: 1:30 10/20 Date, Time Traps Checked: 1:20 10/21 01C

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-3		P man	♀	A		0105			
6		Lag curt.	♂	A		0201			ears conc. h.f 1.5 tail 1.5
9		P man	♀	J		0202			
-13		P man	♀	A		0203			
-10		P. man	♀	A		0103	R		
-12		P. man.	♀	A		0001	R		

iagnostic characters, parasites, etc.

5.1.2.1-3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Lowland Meadow Grid #: 1 Trap Night: 3 Checked By: JC, JR

ate, Time Traps Set: 2:00 10/21 Date, Time Traps Checked: 2:00 10/22

0204

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-12		Pman	♀	A		0204			
7-13		Pman	♀			0205			
-4		P. man.	♀	A		0003			
-9		P. man	♀	A		0004			

*diagnostic characters, parasites, etc.

ECI

3.1.2.1-4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: BOTTOMLAND MEADOW Grid #: 1 Trap Night: 4 Checked By: JC, JB

Date, Time Traps Set: 2:45 10/22 Date, Time Traps Checked: 2:45 10/23

0301

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-10		Pman	♂	A		0301			
C-12		Pman	♂	A		0302			
[illegible]		[illegible]	[illegible]	A		0203			
B-4		P. man	♀	A		0005			
B-9		P. man	♀	A		0010			

nostic characters, parasites, etc.

2.1.2.1-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

cation: Bottomland Meadow Grid #: 1 Trap Night: 5 Checked By: JC, JE

Date, Time Traps Set: 12:30 10/23 Date, Time Traps Checked: 12:30 0304 10/1

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-13		[illegible]	♀	A		[illegible]			
-12		P. man	♂	J		0020			

*diagnostic characters, parasites, etc.

ECI

2.1.2.1 - 6 (ECI)

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Bottomland Meadow Grid # 1 Project 83 Trap night 1

Date, time traps set 12/7/74 10AM Date, time traps checked 12/8/74 10:00 Am.

Last toe clip # used on previous day 0020 Checked by JC DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
3		Microtus montanus?.	0030	♀	ad				150-32-17
5.		Peromyscus maniculatus	0040	♂	S.ad				145-65-
5		P. maniculatus	0050	♂	ad				
2		P. maniculatus	0100	♂	ad				
3		P. maniculatus	0205	♀	ad				recapture
0		" -"	0010	♀	ad				"
9		" "	0004	♀	ad				"
2		Microtus mont...?	—	♀	ad	lact			155-35
4		P. man	0200	♀	SA				

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Bottomland Meadow Grid # ______ Project 83 Trap night 2

Date, time traps set 12/8/74 10 AM Date, time traps checked 12/9/74

Last toe clip # used on previous day 0300 Checked by DM, JC

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-2		Lagurus curtatus ?	0400	M	ad				127-22-17=
-12		P. maniculatus	0303	M	ad				recaptures
-13		P. maniculatus	1000	M	ad				—
-10		" "	0202	f	sad				recaptures
-1		P. man.	0304	♂	A				
-3		M mont.	0305	♂	A				tail bobbed
-5		L. curt	0401	♂	A				h.f. 29 tail 33
-8		M. mont.	0402	♂	A				tail 35 body 11

5.1.2.1-8 (ECI)

ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Bottomland meadow Grid # 1 Project 83 Trap night 3

D[illegible], time traps set 12/9 4:00 Date, time traps checked 12/10 9

Last toe clip # used on previous day 0402 Checked by JC, DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-2		Lagurus curtatus	0403	♀	ad				
-3		P. maniculatus	0404	♂	s ad				
-4		P. maniculatus	0040	♂?	s ad				recap
-10		" "	0104	♀	ad				recap.
-12		" "	0405	♀	s ad				
-5		P. man	2000	♂	A				
-13		P. man	3000	♀	A				

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Bottomland meadow Grid # 1 Project 83 Trap night 4

a time traps set 12/10 Date, time traps checked 12/11 830

Last toe clip # used on previous day 0405 Checked by VC, DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-4		P. mon	#0004	♀	ad				# Two toes on Left foot gone (3+4)
-8		M. montanus	—	♂	ad				dead in Trap.
-13		P. mon	1000						dead in Trap
-10		P. mon.	0202	♀	ad				[illegible]

7

5.1.2.1-10 ECI

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Bottomland Meadows Grid # 1 Project 83 Trap night 5

Date, time traps set 12/11 830 Date, time traps checked 12/12 830

Last toe clip # used on previous day 3000 Checked by JC, DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-4	-	Pman	4600	♂	A				
-5		M. montanus	[illegible]	?					recap. [illegible]
-5		Pman	2000	♂					recap/
-8		M montanus	0011	♀					
-10		P man	0202	♀	SA				recap
-2		L. curtatus	0400	♂	A				dead
-3		P. man	0404	♂	A				
-13		P. man	0205	♀	A				

Grid 2 - Cath Road P-J (5.1.2.2)

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cat Road P/J Grid #: 2 Trap Night: I Checked By: WTT

Date, Time Traps Set: 10/19/74 (0700) Date, Time Traps Checked: 10/20/74 (0730)

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-5		Peromyscus truei	♂	A	—	0001			EAR 23mm tuft at t tail 75m hf 22mm orange on sid
A-6		P. maniculatus	♂	A	—	0002			bicolored tail
B-7		Eutamias quadrivittatus	♀	A	—	0003			hf. 33mm - large dorsal stripes do not extend t base of tail
A-11		P. maniculatus	♂	A	—	0004			
A-12		P. "	♂	A	—	0005			
-12		P. "	♀	A	—	0010			
-8		P. "	♂	A	—	0020			

*diagnostic characters, parasites, etc.

5.1.2.2-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cath Road P-J Grid #: 2 Trap Night: 2 Checked By: WTT

Date, Time Traps Set: 10/20/74 (0730) Date, Time Traps Checked: 10/21/74 (0750)

0030

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		P. maniculatus	♂			0030			bicolored tail
A-2		E quadrivittatus	♂			0040			h.f. 32
A-4		P. truei	♀			0050			e 22
B-4		P. truei	♂			0001✓			large ears
B-6		P. maniculatus	♂			0020✓	DEAD		bicolored tail
A-8		E. quadrivittatus	♂			0100			h.f 33
A-10		E. minimus	♂			0200			h.f. 26
C-13		E. "	♂			0300			h.f. 29
C-12		P. maniculatus	♂			0005✓			bicolored tail
C-9		P. "	escaped						

*diagnostic characters, parasites, etc.

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cath Road P-5 Grid #: 2 Trap Night: 3 Checked By: WTT

Date, Time Traps Set: 10/21/74 (0750) Date, Time Traps Checked: 10/22/74 (0800)

0400

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-1		P. maniculatus	♂	A		0400			bicolored tail
-2		E. quadrivittatus	♂	A		0040	R DEAD		3 d.s. do not extend to tail
A-3		P. truei	♂	A		0001	R		big ears
-5		P. maniculatus	♂	A		0002	R		bicolored tail
-9		P. truei	♀	A		1000			big ears
-13		P. maniculatus	♂	A		0005	R		bicolored tail
-13		P. "	♀			0010	R DEAD		" "
-12		E. minimus	♂	A		0200	R DEAD		5 ds extend to tail
-9		P. maniculatus	♀	A		2000			bicolored tail
-4		P. "	♀	A		3000			" "
		P. "	♂	A		4000	} in same trap		" "
C-2		P. "	♀	A		0011			" "
-1		P. "	♂	A		0030	R		" "

0400 was back in trap A-7! by the time I completed the grid check

---

* diagnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.2-4

Location: Cottle Road P-J Grid #: 2 Trap Night: 4 Checked By: WTT

Date, Time Traps Set: 10/22/74 (0800) Date, Time Traps Checked: 10/23/74 (0740)

0012

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		P. maniculatus	♂	A		0400 R	IN SAME TRAP		bicolored tail
A-1		P. "	♀	A		0013 !			"
C-13		E. minimus	♀	A		0300 R	DEAD		5 ds extend to tail
C-10		E. quadrivittatus	♀	A		0003 R			3 ds don't extend to tail
C-5		E. minimus	♀	A		0012			5 ds extend to tail
C-4		P. maniculatus	♀	A		3000 R			bicolored tail
C-1	-	E. minimus	♂	A		0014			hf. 30 5 ds extend to tail

* diagnostic characters, parasites, etc.

ECI

3.11212 2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cath Pond P-5 Grid #: 5 Trap Night: 5 Checked By: WTT

Date, Time Traps Set: 10/23/74 (1740) Date, Time Traps Checked: (0816) 10/24/75

0015

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		P. maniculatus	♂	A		R 0400			bicolored tail
A-3		E. quadrivittatus	♀	A		0015	~~DEAD~~		3 dk don't extend to tail
A-5		P. maniculatus	♂	A		0021			bicolored tail
-6		P. "	♂	A		R 0002			" "
-8		E. quadrivittatus	♂	A		R 0100			3 dk dark extend to tail
-9		P. truei	♂	A		0022			big ears
C-5		P. maniculatus	♂	A		R 1000			bicolored tail
-4		P. "	♀	A		R 0011			" "
-1		E. minimus	♂	A		R 0014	DEAD		5 dk extend to tail

agnostic characters, parasites, etc.

oology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cat Road P-J Grid # 2 Project 83 Trap night 1

Date, time traps set Dec 7, 1974 Date, time traps checked Dec 8, 1974

Last toe clip # used on previous day 0022 Checked by Sanz, Ellenwood

Start with 0023

pt. c.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-2		P. maniculatus	4000	♂	A				
-11		P. man.	0023	♂	A				
-5		Pero. truei	1000	♀	A				

5.1.2.2 1

eoology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cat Road P.J. Grid # 2 Project 83 Trap night 2

Date, time traps set 12/8/74 Date, time traps checked 12/9/74

Last toe clip # used on previous day 0023 Checked by Sanz, Ellinwood

t.	Total Weight	Species	Toe-Clip No:	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
9		P. man.	2000	♀	A	—	—	—	
1		P. man.	0024	♂	A	—	—	—	

Tracks
A-2
A-5
A-7)
A-8 (Bird
A-9)
A-12 -
C-14
A-13
C-12 - Soul
C-10 - Bird - soul
C-6 - Bird -
C-5 -
C-2

5.1.2.2 — 8

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cath Road P-J Grid # 32 Project 83 Trap night 3

Date, time traps set 12/9/74 Date, time traps checked 12/10/74

Last toe clip # used on previous day 0024 Checked by Ellinwood - Sanz

Begin - 0025

apt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes

NO CAPTURES

ecology consultants, inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cath Road P.J. Grid # 2 Project 83 Trap night 4

Date, time traps set 12/10/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 0024 Checked by Sanz, Ellenwood

begin 0025

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-3		P. truei	1000	♀	—	—	—	—	
-12		P. man	0023	♂	A				
-11		P. man	0025	♂	A				

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cath Road P-J Grid # 2 Project 83 Trap night 5

Date, time traps set 12/11/74 Date, time traps checked 12/12/74

Last toe clip # used on previous day 0025 Begin 0031 Checked by Ellmwood - Sang

ot. :.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		P. man.	4000	♂	A	—	—	—	
-6		P. man.	0002	♂	A	—	—	—	
12		P. man.	0031	♂	A	—	—	—	

Grid 3 - Boot Hill Sage (5.1.2.3)

5.1.2.3 -1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Boothill Sage Grid #: 3 Trap Night: # 1 Checked By: Sanz, Kestrel

Date, Time Traps Set: 10-19-74 Date, Time Traps Checked: 10-20-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
1-1		E. minimus	♂	A	—	0001			h.f. 27 5 lines to base of tail
1-7		P. maniculatus	♀	A	—	0002			hf 19 t 52
1-9		P. maniculatus	♂	A	—	0003			h.f. 19 t. 60
1-10		P. maniculatus	♀	A	—	0004			hf. 18 t 68
-1		E. minimus	♂	A	dist. test.	0005			h.f. 26 5 line to bot

*Diagnostic characters, parasites, etc.

ECI

Rio Blanco

5.1.2.3-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Bodhill sage Grid #: 3 Trap Night: 2 Checked By: Sanz

ate, Time Traps Set: 10-20-74 Date, Time Traps Checked: 10-21-74

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		E. minimus	♀	A	—	0010			
B-6		P. maniculatus	♀	A	—	0002	R		
A-9		P. maniculatus	♂	A	—	0020			
C-11		P. maniculatus	♂	A	—	0003	R		
C-10		E. minimus	♂	A	—	0001	R		
C-6		E. minimus	♀	A	—	0030			
C-1		E minimus	♂	A	—	0040			

iagnostic characters, parasites, etc.

Rio Elanco

SMALL ~~MAMMAL~~ LIVE TRAPPING FIELD DATA SHEET

5.1.2.3-2

ocation: Boothill Sage Grid #: 3 Trap Night: 3 Checked By: Sanz

ate, Time Traps Set: 10-21-74 Date, Time Traps Checked: 10-22-74

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		E. min.	♂	A	—	0040	R		
A-6		P. man	♀	A	—	0002	R		
B-7		E. min	♀	A	—	0030	R		
A-9		E. min	♂	A	—	0001	R		
A-11		E. min	♂	A	—	0050			
-11		E. min	♂	A	—	0100			
C-10		P. man	♂	A	—	0003	R		
-8		P. man	♀	A	—	0200			
-7		P. man	♀?	A	—	0020	R		
C-3		P. man	♀	A	—	0300			

iagnostic characters, parasites, etc.

5.1.2.3-4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

RIO BLANCO

ocation: BOOTHILL SAGE Grid #: 3 Trap Night: 4 Checked By: SANZ

ate, Time Traps Set: 10-22-74 Date, Time Traps Checked: 10-23-74

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		E. min	♀	A		0010	R		
A-3		E. min	♂	A		0040	R		
A-6		E. min	♂	A		0001	R		
B-8		E. min	♂	A		0050	R		
C-12		E. min	♂	A		0100	R		
C-11		P. man	♂	A		0003	R		
C-8		E. min	♀	A		0030	R		
C-7		P. man	♀	A		0200	R		
C-6		P. man	♀	A		0400			

*iagnostic characters, parasites, etc.

5.1.2.3 – 5

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Rio blanco

Location: Boothill Sage Grid #: 3 Trap Night: 5 Checked By: Sanz

Date, Time Traps Set: 10-23-74 Date, Time Traps Checked: 10-24-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		E. minimus	♂	A	—	0040	R		
A-3		E. min	♀	A	—	1000			
A-6		P. maniculatus	♀	A		0002	R		
A-10		P. man	♂	A		0003	R		
A-11		E. min	♂	A		2000			
A-13		E. min	♂	A		0050	R		
C-12		E. min	♀	A		3000			
C-8		E. min	♂	A		0001	R		
C-7		P. man	♀	A		4000			
C-3		E. min	♀	A		0010	R		
[illegible]		P. man	♀	A		0300	R		

iagnostic characters, parasites, etc.

ECI

3.1.2.2-6

ecology consultants, inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Boot Hill Sage Grid # 3 Project 83 Trap night 1

Date, time traps set Dec. 7, 1974 9:00 Date, time traps checked Dec 8, 1974, 9:00

Last toe clip # used on previous day 4000 Checked by Sanz, Ellinwood

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
4-5		Peromyscus mani.	0011	♂	A	—	—	—	
-13		P. mani.	0003	♂	A	—	—	—	
-11		P. man	0012	♀	A	—			

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Boothill Sage Grid # 3 Project 83 Trap night 2

Dat time traps set 12/8/74 Date, time traps checked 12/9/74

Last toe clip # used on previous day 0012 Checked by Sanz; Ellinwood

t.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
8		P. man.	0011	♂	A	—	—	—	
	A-2								
	A-9								

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Bothill-Sage Grid # 3 Project 83 Trap night 3

Date, time traps set 12/9/74 Date, time traps checked 12/10/74

Last toe clip # used on previous day 0012 Checked by Ellinwood - Sang

Begin 0012

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-7		Peromyscus maniculatus	0011	♂	Adult	—			
-11		Peromyscus maniculatus	0012	♀	"	—			
12		P. man	0013	♂	"	—			sluggish
13		P. man	0003	♂	"				

ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Boothill sage Grid # 3 Project 83 Trap night 4

Date, time traps set 12/10/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 0013 Checked by Sanz, Ellenwood
begin 0014

pt. c.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
A-10		P. man	0011	♂	A	—	—		
3-10		P. man	0013	♂	A	—	—	—	
'-8		P. man.	0012	♀	A	—	—	—	

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Boot Hill Sage Grid # 3 Project 83 Trap night 5

Date, time traps set 12/11/74 Date, time traps checked 12/12/74

Last toe clip # used on previous day 0013 Checked by Ellinwood - Sany

Begin 0014

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-5		P. man.	0014	♂	A				
-11		P. man.	0013	♂	A				
-11		P. man.	0003	♂	A				
-9		P. man	0011	♂?	A				
-4		P. man.	0012	♀	A				

Grid 4 - Cliff P-J (5.1.2.4)

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cliff P.J Grid #: 4 Trap Night: 1 Checked By: JC, JB

Date, Time Traps Set: 1:00 10/19 Date, Time Traps Checked: 1·00 10/20

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-7		E. quad? kept	♂	A		0103			Necro
B-8		P. man	♀	SA		0004			
A-8		E min	♀	A		0105			
B-9		P man	♀	A		0201			
C-1		E. min	♂	A		0001			h.f. 28
C-2		E. min	♂	A		0002			h.f. 28
C-8		P. man	♂	A		0003			
C-10		P. truei	♀	A		0004			h.f. 24 / ears 28
C-11		E. quad	♂	A		0005			h.f 31

*diagnostic characters, parasites, etc.

ECI

5.1.2.4-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cliff P.J Grid #: 4 Trap Night: 2 Checked By: JC JB

Date, Time Traps Set: 2:00 10/20 Date, Time Traps Checked: 230 10/21

0202

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-1		Emin	♂	A		0202			
C-1		Emin	♀	A		0203			in same trap as
C-2		Emin	♂	↓		0204			
C-3		Emin	♀			0205			
C-7		Emin	♂			0301			
-8		Pman	♀	J.		0104R			
C-9		Emin	♀	A		0105R			
-10		Emin	♂			0302			
C-11		Pman	♀			0303			
C-17		Equad	♂			0304			
-1		E min	♀	A		0010			
B-4		P. man	♂	A		0020			
B-6		P truei				0004	R		
A-8		E. min	♀	A		0030			
B-8		P. man	♀	A		0040			
B-9		E. quad		A		0005	R		
B-10		E. quad	♂	A		0050			h.f. 34

*diagnostic characters, parasites, etc.

2.1.2.1-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cliff PJ Grid #: 4 Trap Night: 3 Checked By: JC /B

Date, Time Traps Set: 1:00 10/21 Date, Time Traps Checked: 1:07 10/22 0305

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		Emin	♂	A	Test. dist 2,	0305			
A-2		Emin	♀			0401			Same Trap
A-4		Ptruei	♀			0402			
B-6		Pman	♂	SA		0020R			
A-7		Equad	♂			0005R			
B-8		Equad	♂			0354R			
B-9		Pman	♂			0003R			
B-10		Pman	♀			0403			
C-2		E. min	♀	A		0010	R		
C-6		E. min	♂	A		0100			
C-7		E. min	♂	A		0204	R		
C-8		E. min	♀	A		0105	R		
C-9		P. man	♂	A		0200			
C-11		F. min	♂	A		0302	R		
C-12		E. quad	♂	A		0050	R		
C-13		P. truei	♀	A		0004	R		
A-10		P. man	♂	A		0300			

*diagnostic characters, parasites, etc.

ECI

2.1.2.4 6 2.1.2.4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Clif P.I. Grid #: 4 Trap Night: 4 Checked By: JB, JC

Date, Time Traps Set: 1:30 10/22 Date, Time Traps Checked: 11 30 10/23

0033

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-1		E. min				00 33			DEAD
-2		E. min	♀			02 05	R		
-4		E. min	♀			00 10	R		
-4		E. min	♂			00 34			
-6		E. min	♀			00 25			
-7		E. min	?♀			00 41			
-8		P. trnei	♀			00 42			
-9		P. man	♀			00 43			
-1		E. min	♀	A		0330			
-7		E. min	♂	A		0301	R		
[illegible]		E. min	♀	A		0030	R		
-9		B. quad	♂	A		0304	R		
-11		P. trnei	?	A		0340			
-12		B. quad	♂	A		0350			Kept

*diagnostic characters, parasites, etc.

2.1.2.4 6

2.1.2.4-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cliff P.J Grid #: 4 Trap Night: 5 Checked By: JC, JB

Date, Time Traps Set: 2:30 10/23 Date, Time Traps Checked: 2:30 10/24
0404

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		Emin	♀	A		0401R			
-4		Equad	♂			0205R			F 1st toe 2nd ft also injur
-9		Eskin	♂			0321R			
-10		Emin	♂			0322R			
-8		B. min	♀	A		0030	R		Dead
-9		P. man	♂	A		0200	R		
-11		P. truei	♀	A		0004	R		

*diagnostic characters, parasites, etc.

ECI

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cliff P. J Grid # 4 Project 83 Trap night 1

Date, time traps set 12/7 Date, time traps checked 12/8

Last toe clip # used on previous day 0403 Checked by JC DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		Tracks ✓							
-2		P man	0404	♂	A				
-4		Tracks							
3-7		tracks							
-9		P truei	0004						recap
-10		P man	0003	♂					recap
A-13		P truei	0340	♂					recap
2		tracks							
13		"							
-3		P. maniculatus	0400	♂	SA				
-4		P. maniculatus	1000	♂	A				
		P. maniculatus	0200	♂	SA				136-45
-12		M. montanus ✓	2000	♀	A				

ecology consultants, inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cliff P. J. Grid # 4 Project 83 Trap night 2

Date, time traps set 12/9 1200 Date, time traps checked 12/9 1230

Last toe clip # used on previous day 2000 Checked by JC DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-2		P man	0400	♂	A				
-7		P man	0200	♂	↓				
-9		P man	0003	♂					
-12		P truei	0340	♂					
-11		P. truei	0004	♀	A				
-12		P. maniculatus	0200	♂	SA				
			↓ ?						

2.1.2.4-8 ECI

ecology consultants, inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cliff PJ Grid # 4 Project 83 Trap night 3

Date, time traps set 12/9 1230 Date, time traps checked 12/10

Last toe clip # used on previous day 2000 Checked by JC, DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-2		P. maniculatus	0404						Dead in Trap
-4		" "	0300	♂	ad				recap
-7		P. maniculatus	3000	♂	ad				
-9		" "	0003	♂	Sad				recap.
-11		P. Truei	0340	♂	ad				"
-2		P. maniculatus	0405	♂	A				
-4		P. maniculatus	0110	♂	A				
-8		P. man.	0120	♂	A				
-11		P. man.	0200	♂	A				
-12		P. man.	0200	♂	A		necro		same # as above different animal

2.1.2.4 - 7 ECI

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cliff PJ Grid # 4 Project 83 Trap night 4

Date, time traps set 12/10 Date, time traps checked 12/11

Last toe clip # used on previous day 3000 Checked by VC DM

t. :.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		P man	0405	♂	SA	—			micro
7.		P man	4000	♀	A				
.8		P man	0120	♂	SA				
9		P man	0403	♀	A				
10		P man	3000	♂	A				
2		P. man	0400	♂	SA				
4		P. man	0130	♀	SA				
11		P. man	0003	♂	A				
11		P. truei	0340	♂	A				

ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Cliff P.S. Grid # 4 Project 83 Trap night 5

Date, time traps set 12/11 Date, time traps checked 12/12

Last toe clip # used on previous day 0130 Checked by JC DM

t.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
1		Pman	1140	♀	A				[illegible]
3		Pman	0400	♂					recap
7		Pman	4000	♀					recap
11		Pman	0003	♂	SA				micro recap
17		Pman	0150	♂					
		P. man	0044	♀	A				
9		P. man	3000	♂	A				
13		P. man	0045	♂	A				

Grid 5 - Box Elder Bottom (5.1.2.5)

5.1.2.5-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: R. Elder Bottom Grid #: ~~4~~ 5 Trap Night: 1 Checked By: Sanz. [illegible]

Date, Time Traps Set: 10-19-74 Date, Time Traps Checked: 10-20-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-1		P. maniculatus	♀	A	—	0001			bicolored tail
C-3		P. maniculatus	♀	A	—	0002			" "
C-4		P. maniculatus	♀	A	—	0003			" "
B-5		P. maniculatus	♂	A	—	0004			" "
C-5		P. maniculatus	♂	A	—	0005			" "
C-6		P. maniculatus	♀	A	—	0010	Necro		" "
B-6		P. maniculatus	♀	A	—	0020			" "
B-7		P. maniculatus	♂	A	—	0030			" "
B-9		E. minimus	♂	A	—	0040			5 lines to butt.
C-9		P. maniculatus	♂	A	—	0050			bicolored tail
[illegible]		P. maniculatus	♂	A	—	0100			" "
C-12		P. maniculatus	♂	A	—	0200			" "
A-12		M. [illegible]	♂	A	—	0300	Necro		[illegible] 55% of body [illegible]
A-9		P. maniculatus	♀	A	—	0400			bicolored tail
A-8		E. minimus	♀	A	—	1000	Necro		5 lines to butt.
A-7		P. maniculatus	♀	A	—	2000			bicolored tail
A-6		P. maniculatus	♂	A	—	3000			" "
A-4		E. minimus	♂	A	—	4000			5 lines to butt
A-3		E. minimus	♂	A	—	0011			" "
B 4		E. minimus	♂	A	—	0012			" "

*diagnostic characters, parasites, etc.

ECI

Rio Blanco

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

5.1.2.5 – 2

Location: [illegible] Grid #: ~~4~~ 5 Trap Night: 2 Checked By: [illegible]

Date, Time Traps Set: 10-20-74 Date, Time Traps Checked: 10-21-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-1		P maniculatus	♂	A	—	2001			
C-2		E. minimus	♀	A	—	3001			
C-3		P. maniculatus	♀	A	—	4001			
C-4		P. maniculatus	♀	A	—	0111			
B-4		P. maniculatus	♂	A	—	0004	R		
B-5		P. maniculatus	♀	A	—	0020	R	Necro	
C-5		P. maniculatus	♂	A	—	0005	R	Necro	
C-6		E. minimus	♀	A	—	0112			
B-6		P. maniculatus	♂	A	—	3000	R		
B-7		E. minimus	♂	A	—	0011*	R		
[illegible]		P. maniculatus	♂	A.	—	0050	R	Necro	
B-8		E. minimus	♂	A	—	0013			
B-9		P maniculatus	♂	A	—	0014			
C-9		P maniculatus	♂	A	—	0015		Necro	
C-10		P. maniculatus	♀	A	—	0021		Necro	
C-10		P maniculatus	♀	A	—	0022		Necro	
B-10		P maniculatus	♂	A	—	0023			
C-[illegible]		P maniculatus	♂	A	—	0024			
A-[illegible]		P. maniculatus	♀		—	0025			
[illegible]		P maniculatus	♂	A	—	0100	R		
[illegible]		P maniculatus	♀	A	—	3000	R		
A-6 A-4		P. maniculatus P maniculatus	♂ ♂	A	—	0031 0032			
[illegible]		P maniculatus	♂	A	—	0033			
A-1		P. maniculatus	♂	A	—	0034		Necro	

*diagnostic characters, parasites, etc.

ECI

ecology consultants, inc.

5.1.2.5 – X (ECI)
5.1.2.5 – 2

RIO BLANCO

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: [illegible] BOTTOM Grid #: ~~4~~ 5 Trap Night: 3 Checked By: SANZ

Date, Time Traps Set: 10-21-74 Date, Time Traps Checked: 10-23-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		P. man	♂	A	—	0035			
A-3		P. man	♂	A	—	0042			
A-4		E. min	♂	A	—	1000	R		
A-5		P. man	♂	A	—	0004	R		
A-6		P. man	♀	A	—	0044			
A-7		P. man	♀	A	—	0045			
A-9		P. man	♀	A	—	0400	R		
A-10		P. man	♂	A	—	0100	R	Necro	
B-10		P. man	♂	A	—	0023	R		
B-9		E. min	♂	A	—	0053			
-7		P. man	♂	A	—	0030	R		
B-6		P. man	♀	A	—	0054			
B-4		E. min	♀	A	—	0112	R		
C-1		P. man	♀	A	—	0041			
C-2		P. man	♀	A	—	0001	R		
C-3		P. man	♀	A	—	0002	R		
C-4		E. min.	♂	A	—	0011	R		
C-5		P. man.	♀	A	—	0043			
C-8		P. man.	♀	A	—	0051			
C-11		P. man.	♂	A	—	0034	R		
C-12		P. man.	♀	A	—	0052			

*diagnostic characters, parasites, etc.

ECI

5.1.2.5-X (ECD)
5.1.2.5-4

Rio Blanco

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: [illegible] Grid #: 5 Trap Night: 4 Checked By: Sam

ate, Time Traps Set: [illegible] Date, Time Traps Checked: [illegible]

ne et	Total Weight	0102 Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-1		P. man	♂	A		2001	R		
3-6		P. man	♂	A		0103			
3-6		P. man	♂	A		0004	R		
B-7		P. man	♀	A		0044	R		
C-8		P. man	♂	A		0104			
-9		P. man	♂	A		0014	R		
3-10		P. man	♂	A		0105			
C-11		P. man	♂	A		0023	R		
C-12		P. man	♀	A		0201			
A-3		E. man	♂	A		0053	R		
10		P. man	♀	A		0102			
A-9		P. man	♂	A		0202			
A-6		E. man	♂	A		0203			
A-4		P. man	♂	A		0204			

diagnostic characters, parasites, etc.

ECI

5.1.2.5 – X (ECI)
5.1.2.5 – 3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: [illegible]
Grid #: 5
Trap Night: 5
Checked By: Sam

Date, Time Traps Set: 10·22-74
Date, Time Traps Checked: 10·26-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-1		E. minimus	♂	?		0203			
C-7		E. min	♂	A		0101			
B10		P. man	♂	A		0202	R		
C-11		P. man	♂	A		0124	R		
C-12		P. man	♀	A		0025	R		
A-13		E. min	♂	A		0053	R		
A-8		E. min	♂	A		0055			
A-2		P. man	♂	A		0154			

*diagnostic characters, parasites, etc.

ECI

Box Elder Bottom (5)

5.1.2.5 – 6 (ECI)

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING TOE CLIP CHECKLIST

1
00 2
00 3
00 4
00 5

00 0
00 0
00 0
00 0
00 0

0 0
0 0
0 0
04 0

p. man. 20 0
p. man 30 0
ε. min 40 0
ε. min 00 1
ε. min 00 2

00 3
00 4
0 5
0 1
0 2

0 3
00 4
0 5
0 1
0 2

0 33
0 35
0 1
0 2

0 3
00 4
00 5
00 1
00 2

0 3
0 4
0 5
0 1
0 2

0 3
0 4
0 5
0 1
0 2

0 3
0 4
0301
0302

0303
0304
0305
0401
0402

0403
0404
0405
0110
0120

0130
0140
0150
0210
0220

0230
0240
0250
0310
0320

0330
0340
0350
0410
0420

0430
0440
0450
1001
1002

1003
1004
1005
1010
1020

1030
1040
1050
1100
1200

1300
1400
♂ p.m. 2001
2002
2003

2004
2005
2010
2020
2030

2040
2050
2100
2200
2300

2400
♀ e.m. 3001
3002
3003
3004

3005
3010
3020
3030
3040

3050
3100
3200
3300
3400

♀ p.m. 4001
4002
4003
4004
4005

4010
4020
4030
4040
4050

4100
4200
4300
4400
1011

1012
1013
1014
1015
1021

1022
1023
1024
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
1201

1202
1203
1204
1205
1301

1302
1304
1305
1401
1402

1403
1405
♀ p.m. 0111
♀ e.m. 0112
0113

0114
0115
0121
0122
0123

0124
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
♂ p.m. 0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

2.1.2.5 8
2.1.2.2 1

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Box Elder Bottom Grid # 5 Project 83 Trap night 1

, time traps set 12/7/74 4:00 PM Date, time traps checked 12/8/74 4:00 PM

Last toe clip # used on previous day 0205 Checked by Sanz - Ellinwood
- Start w/ 0301

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-2		P. man.	0001	♂	A	—	—	—	
-4		P. man.	0010	♀	A	—	—	—	
-7		P. man.	0020	♂	A	—	—	—	
-12		M. longicaudus	0301	♂	A	—			
-11		P. man	0021	♀	A	—			
~~6~~									
-3		P. Man	3000	♂	A	—			NECRO
A-1		P. Man	0041	♀	A				

A-2
A-6 - Empty trap
A-4
A-5
A-7 - Empty trap
A-8
A-9
A-10
B-8

3.1.2.5-8 ③

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Box Elder Bottom Grid # 5 Project 83 Trap night 2

Date, time traps set 12/8/74 Date, time traps checked 12/9/74

Last toe clip # used on previous day 0301 Checked by Sanz, Ellenwood

pt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-4		P. man.	0030	♂	A	—	—	—	
-5		P. man.	0004	♂	A	—	—	—	
-11		P. man.	0025	♀	A	—	—	—	
-12		Lagurus curtatus	0302	♀	A	—	—	—	T- 1.2 cm
-12		Microtus longicaudus	0303	♂	A	—	—	—	
-10		P. man.	0105	♂	A	—	—	—	
-2		P. man.	1304	♀	A	—	—	—	
-1		P. man.	2000	♂	A	—	—	—	

2.1.2.3 – 4 ECI

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Box Elder bottom Grid # 5 Project 83 Trap night 3

te, time traps set 12/9/74 Date, time traps checked 12/10/74

Last toe clip # used on previous day 0304 Checked by Ellinwood – Sang

Begin 0305

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-4		Peromyscus maniculatus	3000	♂	A	—			
-5		P. man	0305	♀	A	—			
-7		P. man	0004	♂	A	—			
-6		P. man	X000	♀	A	—			missing right front leg to elbow
-8		P. man.	0105	♂	A	—			
-8		P. man	0030	♂	A	—			
-11		P. man	0025	♀	A	—			
-3		P. man	0001	♀	A	—			
7-2		P. man	4000	♀	A	—			
7-4		Sprung – empty							
-11		Sprung – empty							

5.1.2.5 = 10 ECI

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Box Elder Bottom Grid # 5 Project 83 Trap night 4

Date, time traps set 12/10/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 0305 Checked by Sanz, Ellerwood
begin 0401

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
C-6		P. maniculatus	0401	♀	A				
C-8		P. man.	0030	♂	A				
B-8		P. man	0025	♀	A				
C-11		P. man	0024	♂	A				
A-11		M. longicaudus	0301	♂	A				
A-2		P. maniculatus	0001	♀	A				

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Box Elder Bottom Grid # 5 Project 83 Trap night 5

Date, time traps set 12/11/74 Date, time traps checked 12/12/74

Last toe clip # used on previous day 0401 Checked by Ellinwood – Sanz

Begin 0402

apt. oc.	Total Weight	Species.	Toe Clip No:	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		P. maniculatus	0402	♂	A				
-2		P. man	0403	♂	A				
-4		P. man	3000	♂	A				
A-2		P. man	4001	♀	A				
C-6		P. man	0043	♀	A				
-10		P. man	0023	♂	A				
C-11		P. man	0024	♂	A				
A-13		P. man	0105	♂	A				Necro
A-12		M. longicaudus	0303	♀	A				
B-10		P. man.	0025	♀	A				

Grid 6 - Gasline P-J (5.1.2.6)

5.1.2.6-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Gas line P.J Grid #: 6 Trap Night: 1 Checked By: JB, JC

Date, Time Traps Set: 3:00 10/19 Date, Time Traps Checked: 3:00 10/20

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-10		P. man	F	A		00 01			
A-4		E. quad	♀	A		0103			h.f 34

*diagnostic characters, parasites, etc.

S.1.2.6 - 3
S.1.2.6 - 2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Gasline P.J Grid #: 6 Trap Night: 2 Checked By: JB, JC

Date, Time Traps Set: 3:00 10/20 Date, Time Traps Checked: 3:05 10/21

0002

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-7		P. man	♂	A		00 02			
B-5		E. min	♀	A		00 03			
B-4		P. man	♂	A		00 04			
-13		E. quad	♀	A		0104			h.f 34
-6		E. quad	♂	A		0105			h.f 34
-3		P. truei	♀	A		0201			

*diagnostic characters, parasites, etc.

ECI

S.1.2.6 - 3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Gasline P. J Grid #: 6 Trap Night: 3 Checked By: JC

Date, Time Traps Set: 10/21 4:00 Date, Time Traps Checked: 4:00 10/22

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-12		Equad	♀	A		0104R			
A-11		Equad	♂	A		0202			
A-5		Pman	♂	A		0002R			
A-4		Pman	♂	A		0203			
A-2		Emin	♂	A		0204			
-13		P man	♂	A		0005			

*diagnostic characters, parasites, etc.

ECI

5.1.2.6 - 4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Gac Pine R. Grid #: 6 Trap Night: 5 Checked By: JC, JB

Date, Time Traps Set: 3:30 10/23 Date, Time Traps Checked: 3:30 10/24
0303

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
2-9		Emin	♀	A		[illegible]			
3-7		Eamd	♂	A		0103 R			Possibly [illegible]
A-5		E. quad	♂	A		0030			

*diagnostic characters, parasites, etc.

ECI

5.1.2.6-5 ECI

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Casline P-J Grid # 6 Project 83 Trap night 1

, time traps set 12/7 Date, time traps checked 12/8

Last toe clip # used on previous day 0302 Checked by JC DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-3		tracks							
-12		E. quad!	0303	♂	A				tail [illegible]
-5		P. man	0002	♂	A				
-6		E. min	0105	♂	A				

2,1,2,6 - 6

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Gasline P.J. Grid # 6 Project 83 Trap night 2

Date, time traps set 12/8 Date, time traps checked 12/9

Last toe clip # used on previous day 0030 Checked by JC DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
78		E. quadivittatus	0105	♂	ad				~~recapture~~
-12		E quad	0303	♂	"				recapture

5.1.2.6 - 7

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Carlile P.J Grid # 6 Project 83 Trap night 3.

Date, time traps set 12/9 Date, time traps checked 12/10

Last toe clip # used on previous day 0303 Checked by JC, DM

apt. oc.	Total Weight	Species	Toe Clip No:	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-12		Equad 0	0303	♂	A	-			Bobbed tail 1303 remarked

5.1.2.6 - 8

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Gosline PJ Grid # 6 Project 83 Trap night 4

e, time traps set 12/10 Date, time traps checked 12/11

Last toe clip # used on previous day 0303 Checked by JC DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
11-12		E. quad	1303	♂	Ad			- -	Bob tail new
-13		E. quad	0105	♂	"				new

5.1.2.6-4

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Gairbine P5 Grid # 6 Project 83 Trap night 5

Date, time traps set 12/11 300 Date, time traps checked 12/12 300

Last toe clip # used on previous day 0303 Checked by JC/DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
A-10		E. quad	0304	♂	ad				
C-13		E. quad	1303	♂	ad				Bob tail
B-4		P. man.	0002	♂	A				
B-9		E. quad.	0105	♂	A				

Grid 7 - Rabbitbrush (5.1.2.7)

5.1.2.7-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Rabbitbrush Grid #: 7 Trap Night: 1 Checked By: JC JB

Date, Time Traps Set: 11:30 10/19 Date, Time Traps Checked: 800 10/20

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-1		E min	F	A		0103			
C-3		P man	F	A		0104			
C-5		E min	M	A		0105			
C-6		P man	M	A		0201			
C-9		P man	F	A		0202			
C-11		P man	F	A		0203			
A-1		E. min	♂	A		0001			h.f. 28
A-3		P. man	♂	A		0002			
A-3		P. man	♂	A		0003			
A-5		E. min	♀	A		0004			h.f. 25
7		P. man	♂	J		0005			
A-7		E. min	♀	A		0010			h.f. 30
B-8		P. man	♂	A		0020			
A-11		E. min	♀	A		0030			h.f. 30

*diagnostic characters, parasites, etc.

ECI

5.1.2.7 - 2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Rabbitbrush Grid #: 7 Trap Night: 2 Checked By: JC - JB

Date, Time Traps Set: 8 10/20 Date, Time Traps Checked: 8 10/21 0004

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-13		E min	♀	A		0204			st 1, 3 Sb. 15
A-12		E min	♀	A		0205			C1 33
A-11		E min	♀	A		0030R			
A-9		E min	♀	A		0301			S 33
A-8		E min	♀	A		3000R			hf < 30 from Sp. P.
A-7		E min	♂	A		0302			necro
A5		E min	♀	A		0010R			necro
A-4		E min	♀	A		0303			
A-3		P man	♂	J		0002R			necro
3-4		E min	♀	A		0304			
2		E. min	♀	A		0040			
-5		P. man	♂	J		0050			
-5		P. man	♀	?		0100			Dead eaten by 0050
-6		E. min	♂	A		0200			
-8		E. min	♂	A		0105 R			Dead
-9		E. min	?	A		0300			
-10		E. min	♀	A		0400			
-11		Microt. long. (?)				1000			Dead
3-10		E. min	♀	A		2000			
3-8		E. min	♀	A		0004 R			

*diagnostic characters, parasites, etc.

5.1.2.1-3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Rabbitbrush Grid #: 7 Trap Night: 3 Checked By: JB, JC

Date, Time Traps Set: 10:30 10/21 Date, Time Traps Checked: 10:30 10/22

3000

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-13		E. min	♀	A		30 00			
C-10		E. min	♀	A		03 00	R		
B-9		E. min	♂	A		40 00			
-9		E min	♀	J		04 00	R		
-6		E. min	♀	A		00 11			
-4		E. min	♀	A		03 04	R		
A-7		E. min	♀	A		0004	R		Dead: remarked as 03
A-4		E. min	♀	A		0403	R		from South P.J.
A-3		E. min	♀	A		$0^{4}_{3}03$	R		
A-1		E. min	♂	A		0305			
7		E. min	♂	A		0401			
B-8		E. min	♀	A		0402			

ostic characters, parasites, etc.

5.1.2.7-4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Rabbitbrush Grid #: 7 Trap Night: 4 Checked By: JC JB

Date, Time Traps Set: 830 10/22 Date, Time Traps Checked: 830 10/23
0404

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-4		Emin	♀	A		0303R			h.f. 27
A-1		Emin	♀	A		0001R			
B-4		Emin	♂	A		0401E			micro
C-4		P. man	♀	A		0012		-	
C-13		E. min	♀	A		3000	R		Dead

agnostic characters, parasites, etc.

5.1.2.7-5

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Rabbitbrush Grid #: 7 Trap Night: 5 Checked By: J C JB

Date, Time Traps Set: 9:00 10/23 Date, Time Traps Checked: 9:00 1415 10/24

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		Emin	♀	A		0010E			Necro
C-4		Emin	♀	A		0303R			Necro
A-7		P. man	♂	A		1225			
A-4		P. man	♂	A		1231			

*diagnostic characters, parasites, etc.

ECI

5.1.2.7 – 6 ECI

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Rabbit brush Grid # 7 Project 83 Trap night 1

Date, time traps set 12/7/ 1200 Date, time traps checked 12/8 1200

Last toe clip # used on previous day 0402 Checked by DM, JC
start w/ 1415

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
C-2		Tracks							
-3		P man	0012	♀	ad				
-5		P man	1225	♀	↓				
-7		Tracks			↓				
-12		P man	1231	♂	ad				
A-2		TRACKS							
3-4									
3-5									
A-5									
A-6		M. longicaudus	1225	♂	A				body 109 /tail
3-8		Tracks							
[illegible]		M. longicandus	1415	♀					body 109 /tail 5

5178-5
3.1.2.4-1

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Rabbitbrush Grid # 7 Project 83 Trap night 2

Date, time traps set 12/8 Date, time traps checked 12/9

Last toe clip # used on previous day 1231 Checked by JC DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		P. maniculatus	1232	♂	s ad				
-2		P. maniculatus	1233	♂	S, ad				
-12		P. maniculatus	1234	♂	ad				

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Rabbitbrush Grid # 7 Project 83 Trap night 3

e, time traps set 12/9 Date, time traps checked 12/10

Last toe clip # used on previous day 1234 Checked by JC DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-5		P. maniculatus	2005	♂	sad				recapture.
-3		P. maniculatus	1241	♀	sad				〃
-1		〃 〃	1242	♂	ad				〃
-2		M. longicaudis ?	1243	♀	ad				158 - 48
-12		P. maniculatus	1231	♂	ad				recapture
-13		P. maniculatus	1244	♀	sad				〃
-12		M. longicaudis	1415						died in traps
-6		M. longicaudis	1235	♂	ad				150-50

5.1.2.7-4

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Rabbitbrush Grid # 7 Project 83 Trap night 4

te, time traps set 12/10 Date, time traps checked 12/11

Last toe clip # used on previous day 1415 Checked by JC DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
7-12		P. man	1421	♂	ad				
-11		P. man	1422	♀	ad				
-9		P. man	1423	♂	ad				
-7		M. longicaudus	1235		ad				recap.
-6		P. man	0005	♂	ad				recap
B-6		P. man	1225		ad				Dead in Trap
-4		P. man	0012	♀	ad				Recap
7-3		P. man.	1424	♀	ad				-
		P. man	1425	♂	ad				-
-3		P. man.	1431	♀	ad				Lost tail
-0		M longicaudus	1432	♂	ad				168-53-
		P. man	[illegible]	♀	ad	1			Dead in Trap
-1		P. man.	1233	♂	JA				Recap

5.1.2.7 – 10 ECI
ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Rabbitbrush Grid # 7 Project 83 Trap night 5

e, time traps set 12/11 1130 Date, ~~time~~ traps checked 12/12 1130

Last toe clip # used on previous day 1432 Checked by JC / DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
A-4		P man	0012	♀	A				recap
B6		P man	0005	♂	↓				recap
B-7		M long	1235	♂	↓				recap
B-8		P man	1434	♀	↓				
-11		P man	1231	♂	↓				recap
C-12		P man	1234	♂	↓				recap
-13		P man	1233	♀	↓				should be 143 mis mark
A-10		P. man	1245	♀	SA				new capture
A-3		P. man	0003	♂	A				
A-2		P. man	no mark	♀	SA				dead
A-1		P. man	1425	♂	A				

Grid 8 - Remark Sage (5.1.2.8)

5.1.2.8-7

SMAL' AMMAL LIVE TRAPPING FIELD DATA HEET

ocation: REMARK SAGE Grid #: 8 Trap Night: 1 Checked By: Sanz, Kestrel

ate, Time Traps Set: 10-19-74 Date, Time Traps Checked: 10-20-74

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-1		P. maniculatus	♂	A		0001			t60 hf 19
3		P. maniculatus	♂	A		0002			t69 hf 19 ear 15
-7		P. maniculatus	♀	A		0003			t65 hf 18
-9		P. maniculatus	♂	A		0004			t64 hf 16
-10		P. maniculatus	♂	A		0005			hf 19 ~~e~~ T-59
-12		P. maniculatus	♂	A		0010			hf 17 t 64 e-
-13		P. maniculatus	♀	A		0020			hf 17 t 66 e 18
1-13		P. maniculatus	♂	A		0013			greyish brown hf 17 e 17 t 65
-10		P. maniculatus	♀	A		0030			hf 16 e 15 t 57
-9		E. minimus	♂	A	swollen testis	0040			SBOT hF 28
		P. maniculatus	♀	A		0050			hf 19 t 54
-6		E. minimus	♂	A		0100			SBOT hf 29
5		P. maniculatus	♂	A		0200			hd 19 t 59 e 16
13		P. maniculatus	♂	A		0300			hd 19 t 65 e 17
12		E. minimus	♂	A		0400			SBOT hf 26

iagnostic characters, parasites, etc.

ECI

5.1.2.8-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Remarked Sage Grid #: 8 Trap Night: 2 Checked By: Kestrel

ate, Time Traps Set: 10-20-74 Date, Time Traps Checked: 10-21-74

ime et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-12		P. maniculatus	♂	A		1000			
-12		E. minimus	♂	A		2000			
-11		P. maniculatus	♀	A		3000			
-10		P. maniculatus	♀	A		0004	r necro		
-10		E. minimus	♀	A		4000			
-9		E. minimus	♂	A		0040	r		
13-9		E. minimus	♂	A		0011			
-9		P. maniculatus	♂	A		0005	r necro		
-7		E. minimus	♂	A		0012			
-4		P. maniculatus	♀	A		0003	✓		
6		P. maniculatus	♂	A		0200	r		
13-5		E. minimus	♂	A	swollen testis	0400	r		
-4		P. maniculatus	♂	A		00102	r		
13-4		P. maniculatus	♀	A		0013			
A-3		P. maniculatus	♂	A		0300	r		
-3		E. minimus	♂	A		0014			
-1		P. maniculatus	♀	A		0015			
A-2		P. maniculatus	♂	A		0121			
		Pitfall	P.	man	culatus				

*diagnostic characters, parasites, etc.

5.1.2.8-3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Desmark Sage Grid #: 8 Trap Night: 3 Checked By: Kestrel

Date, Time Traps Set: 10/21/74 0023 Date, Time Traps Checked: 10/22/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-13		P. maniculatus	♀	A		0023			
-12		P. maniculatus	♂	A		0010	r		necro
-10		P. maniculatus	♀	A		0003	r		necro
-9		E. minimus	♂	A		0004	r		natural toe clip?
-9		E. minimus	♂	A		0024			
-8		P. maniculatus		A		escaped			
-6		P. maniculatus	♂	A		0200	r		
-5		E. minimus	♂	A		0025			necro
-5		E minimus	♂	A		0012	r		necro
-4		P. maniculatus	♂	A		0015	r		poor condition
4		P. maniculatus	♀	A		0031			necro
-3		P. maniculatus	♀	A		0032			
A-3		E. minimus	♂	A		0033			
-2		E. minimus	♂	A		0014	r		
-2		P. maniculatus	♀	A		0034			necro

tic characters, parasites, etc.

5.1.2.8 — 4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Remarked Sage Grid #: 8 Trap Night: 4 Checked By: Kestel

Date, Time Traps Set: 10/22/74 Date, Time Traps Checked: 10/23/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
1-13		P. maniculatus	♂	A		0023	✓		
-12		P. maniculatus	♂	A		1000	✓		
-10		P. maniculatus	♀	A		3050	✓		Check toe clip
13-8		P. maniculatus	♀	A		0035			
-6		P. maniculatus	♀	A		0041			
-5		P. maniculatus	♀	J		0013	✓		
-5		P. maniculatus	♂	J		0200	✓		
-5		P. maniculatus	♀	A		0012			
-1		P. maniculatus	♂	A		0310	✓		

*diagnostic characters, parasites, etc.

5.1.2.8 - 5

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Remarked Sage Grid #: 8 Trap Night: 5 Checked By: Kestrel

Date, Time Traps Set: 10/23/74 Date, Time Traps Checked: 10/24/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-13		P. maniculatus	♂	A		0023	R		
A-12		F. minimus	♂	A		0043			
B-10		E. minimus	♂	A		0044			
B9		P. maniculatus	♂	A		0045			
A9		E. minimus	♂	A		0011	R		
1-7		E. minimus	♂	A		0004	R		
B-7		P. maniculatus	♀	A		0042	P		
A-6		P. maniculatus	♂	A		0051			
C-6		P. maniculatus	♀	A		3050	R		
A-5		F. minimus	♂	A		0100	R		
4		P. maniculatus	♀	A		0052			
-3		P. maniculatus	♂	A		0002	R		
-2		P. maniculatus	♂	A		0021	R		
A-2		P. maniculatus	♂	A		0300	P		
A-1		E. minimus	♂	A		0053			necro

*diagnostic characters, parasites, etc.

B-6 — 1 snapped trap + [illegible]

ECI

[illegible]

[illegible] OHIO [illegible]

[illegible]

5.1.2.8 — 8
5.1.2.8 — 6

ocology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Remark Sage Grid # 8 Project 83 Trap night 1

Date, time traps set 12/7/74 Date, time traps checked 12/8/74

Last toe clip # used on previous day 0053 Checked by Ellinwood - Sang

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
C-11	—	M. longicaudus	0054	M	A	—			t=46 , 126
B-6	—	Snapped trip + soul							

5.1.2.8 — 8
5.1.2.8 — 1

oology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Remark Sage Grid # 8 Project 83 Trap night 2

Date, time traps set 12/8/74 Date, time traps checked 12/9/74

Last toe clip # used on previous day 0054 Checked by Sanz, Ellinwood

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
C-12		Lagurus curtatus	0055	M	A				

A-6 - Empty trap
A-5 " "

S,1,2,8 — 8 ECI

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Remark Sage Grid # 8 Project 83 Trap night 3

Date, time traps set 12/9/74 Date, time traps checked 12/10/74

Last toe clip # used on previous day 0055 Begin 0101 Checked by Ellinwood — Sanz

NO Captures

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-10		Sprung - Empty							
3-6		Sprung - inverted							

S.1.2.8 - 9

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name REMARK SAGE Grid # 8 Project 83 Trap night 4

Date, time traps set 12/10/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 0055 Checked by Sanz. Elcinwood

Begin 0101

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
C-4		Lagurus curtatus	0101	♂	A				
C-11		M. longicaudus	0054	♂	A				
C-12		Lagurus curtatus	0055	♀	A				
A-13		Lagurus curtatus	0102?	♂	A				

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Remark sage Grid # 8 Project 83 Trap night 5

Date, time traps set 12/10/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 0102 Checked by Ellinwood - Sany
Begin 0103

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
C-2		lagurus curtatus	0103	♂	A	—	—	—	Necro
C-11		P. man	0104	♀	A	—	—	—	
-12		P. man	0105	♂	A	—	—	—	
F-15		lagurus curtatus	0201	♂	A	—	—	—	
A-10		P. man	0202	♀	A	—	—	—	
B-8		P. Man	0005	♂	A	—	—	—	
B-5		P. man	0035	♀	A	—	—	—	
A-2		lagurus curtatus	0203	♂	A	—	—	—	

Grid 9 - Upland Meadow (5.1.2.9)

5.1.2.9-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: UPLAND MEADOW Grid #: ~~10~~ 9 Trap Night: 1 Checked By: Sanz

Date, Time Traps Set: 10-19-74 Date, Time Traps Checked: 10-20-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-13		Peromyscus maniculatus	♂	S.A.	–	0001			t.51 h.f. = 15
A-12		P. maniculatus	♀	A	–	0002			t.57 h.f = 16
A-11		P. maniculatus	♂	A	–	0003			t.53 h.f -12
A-10		P. maniculatus	♂	A	–	0004			t · 57 h.f = 18
B-10		E. minimus	♀	A	–	0005			h.f. 27 5 stripe to base of
B-9		P. maniculatus	♀	A	–	0010			h.f. 17 t = 67
A-9		P. maniculatus	♂	A	–	0020			h.f 18 t = 53
B-5		P. maniculatus	♀	A	–	0030			h.f. -16 t = 60
C-4		P. maniculatus	♂	A	–	0040			h.f 19 t = 59
C-7		P. maniculatus	♀	A	–	0050			h.f 17 t = 58
[illegible]		P. maniculatus	♀	A		0100			h.f 18 t = 55
1		P. maniculatus	♀	A		0200			h.f 1[illegible] t · 58
12		P. maniculatus	♂	A		0300			h.f. 18 t = 63

*diagnostic characters, parasites, etc.

ECI

5.1.2.9-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Upland meadow Grid #: 9 Trap Night: 2 Checked By: Sanz

Time Traps Set: 10-20-74 Date, Time Traps Checked: 10-21-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-11		Peromyscus maniculatus	♂	A	—	0101			
C-10		P. maniculatus	♂	A	—	0200	R		
B-9	—	P. maniculatus	♀	A	—	0010	R		
C-8		P. maniculatus	♂	A	—	0004	R		
B-8		Eutamias minimus	♂	A	[illegible]	0201			
B-7		E. minimus	♀	A	—	0301			
C-7		P. maniculatus	♂	A	—	0012	R		
B-5		P. maniculatus	♀	A	—	0050	R		
B-4		P. maniculatus	♂	A	—	0400			
[illegible]		P. maniculatus	♀	A	—	1000			
A-7		E. minimus	♀	A	—	2000			
A-9		P. maniculatus	♂	A	—	0020	R		
A-10		E. minimus	♂	A	—	3000			
A-11		E. minimus	♂	A	—	4000			
A-12		P. maniculatus	♂	A	—	0011			
A-13		P. maniculatus	♀	A	—	0002	R		

*diagnostic characters, parasites, etc.

SCI

RIO. BLANCO

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

5.1.2.9-3

Location: UPLAND MEADOW Grid #: 9 Trap Night: 3 Checked By: Sanz

Date, Time Traps Set: 10-21-74 Date, Time Traps Checked: 10-22-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-11		P. maniculatus	♀	A	—	0200	R		Necro
C-10		P. man.	♂	A	—	0200	R		
B-9		E. minimus	♀	A	—	0005	R		
C-9		E. min.	♂	A	—	0012			
B-5		P. man	♀	A	—	0030	R		
B-4		P. man	♀	A	—	0013			
C-1		P. man	♂	A	—	0014			
A-3		P. man	♂	A	—	0015			
A-7		P. man	♀	A	—	0050	R		
A-11		E. min.	♂	A	[illegible]	0201	[illegible]		
-11		P. man.	♀	A	—	0010	R		
A-12		E. min	♂	A	—	0021			
A-13		E. min	♂	A	—	0022			

*diagnostic characters, parasites, etc.

ECI

5.1.2.9 -4

RIO BLANCO

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: UPLAND MEADOW Grid #: 9 Trap Night: 4 Checked By: Sam

Date, Time Traps Set: 10-22-74 Date, Time Traps Checked: 10-23-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-11		P. maniculatus	♂	A		0101	R		
C-10		P. maniculatus	♂	A		0023			
C-8		P. man	♂	A		0024			
C-7		P. man	♀	A		0100	R		
B-5		P. man	[illegible]	A		0025			
C-5		P. man	♀	A		0031			
C-4		E. minimus	♀	A		0032			
C-3		P. man	♀	A		0030	R		
C-1		P. man	♂	A		0033			
[illegible]B		P. man	♀	A		0034			
A-3		P. man	♀	A		0035			
A-5		P. man	♂	A		0001	R		
A-7		E. min	♂	A		0201	R		
A-8		E. min	♀	A		0301	R		
A-9		P. man	♂	A		0003	R		
A-10		P. man	♂			0004	R		
A-12		P. man	♂	A		0041			

*diagnostic characters, parasites, etc.

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

5.1.2.9-5

Location: upland meadow Grid #: 9 Trap Night: 5 Checked By: [illegible]

Date, Time Traps Set: 10-23-74 Date, Time Traps Checked: 10-28-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-11		P. maniculatus	♂	A	—	0015	R		
C-7		P. man	♂	A	—	0042		[illegible]	
C-5		P. man	♀	A	—	0031	R		
C-3		P. man	♂	A	—	0040	R		
C-2		E. min	♂	A	—	0043			
B-5		P. man	♂	A	—	0024	R		
A-6		P. man	♂	A	—	0001	R		
A-7		E. min.	♀	A	—	0044			
A-9		P. man.	♂	A	—	0300	R		
A-12		P. man	♀	A	—	0002	R		
-13		E. min	♂	A	—	4000	R		

*diagnostic characters, parasites, etc.

ECI

UPLAND MEADOW

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

ecology consultants, inc.

♂ P.M.
marked
0100
-0
0101

0[illegible]1
0[illegible]2
[illegible]3
0[illegible]4
0[illegible]5

0[illegible]0
0[illegible]0
0[illegible]0
0[illegible]0
0[illegible]0

0[illegible]0
0[illegible]0
[redacted]
0[illegible]0
1[illegible]0

2[illegible]0
3[illegible]0
4[illegible]0
[redacted]
0[illegible]12

0[illegible]3
0[illegible]4
00[illegible]5
00[illegible]1
[redacted]

0[illegible]3
0[illegible]4
0[illegible]5
0[illegible]1
0[illegible]2

0[illegible]3
0[illegible]4
0[illegible]5
[redacted]
0[illegible]2

0[illegible]3
[redacted]
0045
0051
0052

0053
0054
0055
0101
0102

0103
0104
0105
[redacted]
0202

0203
0204
0205
[redacted]
0302

0303
0304
0305
0401
0402

0403
0404
0405
0110
0120

0130
0140
0150
0210
0220

0230
0240
0250
0310
0320

0330
0340
0350
0410
0420

0430
0440
0450
1001
1002

1003
1004
1005
1010
1020

1030
1040
1050
1100
1200

1300
1400
2001
2002
2003

2004
2005
2010
2020
2030

2040
2050
2100
2200
2300

2400
3001
3002
3003
3004

3005
3010
3020
3030
3040

3050
3100
3200
3300
3400

4001
4002
4003
4004
4005

4010
4020
4030
4040
4050

4100
4200
4300
4400
1011

1012
1013
1014
1015
1021

1022
1023
1024
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
1201

1202
1203
1204
1205
1301

1302
1304
1305
1401
1402

1403
1405
0111
0112
0113

0114
0115
0121
0122
0123

0124
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

[illegible]-7 ECII

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Upland Meadows Grid # 9 Project 83 Trap night 1

Date, time traps set 12/7/74 Date, time traps checked 12/8/74

Last toe clip # used on previous day 0044 Checked by Ellinwood - Sany

start w/ 0045

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		No Contact							
	A-10	" "							
	A-6	" "							
	C-10	Mouse tracks -							
	C-7	" "							

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Upland Meadow Grid # 9 Project 83 Trap night 2

e, time traps set 12/8/74 Date, time traps checked 12/9/74

Last toe clip # used on previous day 0044 Checked by Sarg, Ellinwood

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		No Captures!							
	C-7 -	Tracks							

5.1.2.9-9 ECI

ecology consultants,

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Upland Meadow Grid # 9 Project 83 Trap night 3

Date, time traps set 12/9/74 Date, time traps checked 12/10/74

Last toe clip # used on previous day 0044 Checked by Ellinwood - Sang

Begin 0045

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
3-7		Lagurus curtatus	0045	♂	—	—			
B-5		EMPTY - Sprung							

5.1.2.4-10 ECI
ocology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Upland meadow Grid # 9 Project 83 Trap night 4

e, time traps set 12/11/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 0045 begin 0051 Checked by Sanz, Ellenwood

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-7	–	lagurus curtatus	0045	♂	A				
-12		" ? "	0051	♂	A				

5.1.2.9-11 ECI
ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Upland Meadow Grid # 9 Project 53 Trap night 5

e, time traps set 12/10/74 Date, time traps checked 12/12/74

Last toe clip # used on previous day 0051 Checked by Ellnwood - Sanz

Begin 0052

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-12		P. man	0002	♀	A	—	—	—	
-11		P. man	0300	♂	A				
-3	—	Mic. longicaudus	0052	♀	A				Tail- 58mm 16
-2		P. man	0035	♀	A				
-1		P. Man	0033	♂	A	—	—	—	—
-5		P. man	0040	♂	A	—	—	—	
-7		Lagurus curtatus	0045	♂	A			Necro	
-10		P. man.	0023	♂	A	—	—		
-11		P. man.	0053	♂	A	—	—	—	
-13		P. man	0011	♂	A				

Grid 10 - Tower P-J/Brush (5.1.2.10)

3.1.2.10-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Tower P. J-Brush Grid #: 10 Trap Night: 1 Checked By: JB - JC

Date, Time Traps Set: 11:00 AM 10/19 Date, Time Traps Checked: 7:30 10/20

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		P. Man	M	ADULT		0001			tail < body
-4		E. Min	F	ADULT		0002			Hind foot 25
-7		E. Min	F	A		0003			Hf 28 skull-30
-9		P. Man	M	A		0004			tail < body
-12		P Man	M	A		0005			tail < body
-13		P. Man	F	A		0010			tail < body
6		E. Min	M	A		0020			hind foot 28
-4		P. Man	F	A		0030			
-13		P. man	♂	A		0103			
10		P. man	♀	SA		0104			
		P. man	♂	A		0105			

iagnostic characters, parasites, etc.

3.112.13

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Tower P.J Brush Grid #: 10 Trap Night: 2 Checked By: JC JB

Date, Time Traps Set: 7:30 10/20 Date, Time Traps Checked: 7:30 10/21

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-13		P man	♂	A		0201			
C-12		E. quad	♀	A		0202			Necro
-11		P man	♂	A		0203			
C-9		P man	♀			0305			
-8		P man	♂	A		0204			
C-7		E quad	♀	A		0205			h.f 33 Sb
C-4		E quad	♂	A		0301			h.f 34 sb
C-3		E min	♂	A		0302			h.f 30 st 30
C-2		E min	♀	A		0303			h.f <30
-1		P. man	♂	J		0040			
		P. man	♂	A		0050			
		E. min	♂	A		0100			
-7		E. min	♂	A		0200			
A-11		E. min	♂	A		0300			

*diagnostic characters, parasites, etc.

5.1.2.10-3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Tower P.J. Brush Grid #: 10 Trap Night: 3 Checked By: JC JB

Date, Time Traps Set: 8:00 10/21 Date, Time Traps Checked: 10:00 10/22

0304

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
1-11		Emin	♀	A		0003R			
A-9		P.man	♀	A		0304			
A-6		Emin	♂	A		0305			
A-4		Emin	♂	A		0200R			
A-2		Emin	♀	A		0401			
A-1		Emin	♂	A		0402			
-13		E. min	♂	A		0400			
-12		P. man	♂	A		0005	R		
-11		P. man	♂	A		0203	R		Dead
-10		P. man	♂	A		0103	R		
		E. min	?	A		0002	R		
		E. min	♂	A		1000			

*diagnostic characters, parasites, etc.

ECI

5.1.2.10-4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Tower P.J Grid #: 10 Trap Night: 4 Checked By: JB JC

Date, Time Traps Set: 8:00 10/22 Date, Time Traps Checked: 8:00 10/23 2000

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-1		E. min	♀	A		04 01	R		
-2		E. min	♂	A		04 02	R		
		E. min	♀	A		20 00			
6		P. man	♂	A		01 05	R		
-7		E. min	♂	A		01 00	R		
-8		E. quad?	♀	A		02 05	R		
-11		P. man	♂	A		30 00			
-12		E. quad	♀	A		40 00			
-10		E. min	♂	A		03 05	R		
-11		E. min	♂	A		0300	R		
5		P. man	♂	A		0403			
		P. man	♂	A		0404			
-8		P. man	♂	A		0405			
-3		P. man	♂	A		0050	R		
-2		E. min	♂	A		1000	R		
B-5		E. min	♀	A		0002	R		

*diagnostic characters, parasites, etc.

ECI

5.1.2.10 — 5

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Tauer D. J. Grid #: 10 Trap Night: 5 Checked By: J C, JB

Date, Time Traps Set: 5:00 10/23 Date, Time Traps Checked: 8:00 10/24
0110

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-12		Eanad	♂	A		0110			
-11		Pman	♂	A		0120			
-7		Eanad	♀	A		2205R			
A-6		Emin	♂	A		0302R			
A-3		Emin	♂	A		0130			
A-2		Emin	♀	A		0401R			
A-1		Emin.	♂	A		0140			
-2		E. min	♂	A		0402	R		Dead
-3		E. min	♂	A		0200	R		Dead
-10		E. min	♂	A		0020	R		
		E. min	♂	A		0300	R		Dead
		E. min	♀	A		0003	R		Dead
2		E. min	♂	A		0400	R		Dead
-10		P. man	♀	A		0104	R		

*diagnostic characters, parasites, etc.

ECI

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tower P-J/Brush Grid # 10 Project 83 Trap night 1

Date, time traps set 12 12/7 Date, time traps checked 2 12/8

Last toe clip # used on previous day 4000 Checked by [illegible], DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
[illegible]		Tracks							around traps
		— NO CAPTURES —							

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tower PJ / brush Grid # 10 Project 83 Trap night 2

Date, time traps set 12/8 Date, time traps checked 12/9

Last toe clip # used on previous day 4000 Checked by JC DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		no captures							

5.1.2.10 - 8

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tower Pt/Brush Grid # 10 Project 83 Trap night 3

Date, time traps set 12/9 Date, time traps checked 12/10

Last toe clip # used on previous day 0140 Checked by JC DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		no captures							

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tower PJ/Brush Grid # 10 Project 83 Trap night 4

Date, time traps set 12/10 Date, time traps checked 12/11

Last toe clip # used on previous day 4000 Checked by JC/DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
7-13		P. man	0005	m	ad				recap
7-12		P. man	0103	♂	ad				recap.

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tower PT/Brush Grid # 10 Project 83 Trap night 5

Date, time traps set 12/11 7130 Date, time traps checked 12/12 1130

Last toe clip # used on previous day 0140 Checked by JC /DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-12		P man	0230	♀	SA				recap
-12		P. man	0103	♂	A				
-11		P. man	3000	♂	A				

Grid 11 - Tract Mtn Brush (5.1.2.11)

5.1.2.11-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: TRACT MT. RANGE Grid #: 11 Trap Night: 1 Checked By: Sanz

Date, Time Traps Set: 10-19-74 Date, Time Traps Checked: 10-20-74

Time Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		P. maniculatus	♀	A	—	0001			h.f. 17 t = 71 distinct & bicolored tail
A-4		P. maniculatus	♀	A	—	0002			h.f. 17 t = 65 "
B-4		E. minimus	♀	A	—	0003			h.f. 26 5 lines to back
B-5		E. minimus	♀	A	—	0004			h.f. 28 " " "
B-6		P. maniculatus	♂	A	—	0005			h.f. 19 t = 59
B-8		E. minimus	♂	A	—	0010			h.f. 26 5 lines to back.
A-12		E. minimus	♀	A	—	0020			h.f. 27 " " "
C-13		P. maniculatus	♂	A	—	0030			h.f. 17 t = 60
C-12		E. minimus	♂	A	—	0040			h.f. 27 5 lines to back
C-6		E. minimus	♀	A	—	0050			h.f. 26 " " "

*diagnostic characters, parasites, etc.

ECI

Rio blanco

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

2.1.2.11-2

Location: Tract Mt. Brush
Grid #: 11
Trap Night: 2
Checked By: Sare

Date, Time Traps Set: 10-20-74
Date, Time Traps Checked: 10-21-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		Eutamias minimus	♂	A	—	0100			
A-2		P. maniculatus	♀	A	—	0001	R		
B-4		P. maniculatus	♂	A	-	0200			
B-5		F. minimus	♀	A	—	0050	R		
A-6		F. minimus	♀	A	—	0004	R		
B-7		P. maniculatus	♂	A	-	0005	R		
A-8		E. minimus	♂	A	—	0300			
B-8		F. minimus	♂	A	—	0400			
A-9		F. minimus	♂	A	—	0040	R		
A-10		E. minimus	♂	A	—	1000			
[illegible]		F. minimus	♂	A	—	0010			
A-13		F. minimus	♀	A	—	0020	R		
-13		P. maniculatus	♂	A	—	2000			
11		F. minimus	♀	A	—	3000			
-6		E. minimus	♀	A	—	4000			
C-3		E. minimus	♀	A	-	0003	R		
C-2		P. maniculatus	♀	A	—	0011			
C-1		F. minimus	♀	A	—	0012			

*diagnostic characters, parasites, etc.

ECI

SMALL ANIMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.11-3

Location: TRCT MT. BRUSH Grid #: 11 Trap Night: 3 Checked By: [illegible]

Date, Time Traps Set: 10-21-74 Date, Time Traps Checked: 10-[illegible]-74

Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-4		P. man	♀	A	—	0002	R		
B-4		[illegible]	♀	A	—	[illegible]	R		
A-7		P. man	♂	A	—	0200	R		
B-8		E. min	♀	A	—	0004	R		
A-9		E. min	♀	A	—	0013			
B-10		E. min	♀	A	—	0020	R		
A-10		E. min	♂	A	—	0300	R		
C-13		P. man	♂	A	—	0030	R		
C-12		E. min	♀	A	—	3000	R		
C-11		E. min	♀	A	—	0014			
		E. min	♀	A	—	4000	R		
C-8		E. min	♂	A	—	0010	R		
C-2		E. min	♂	A	—	[illegible]	R		
C-4		E. min	♀	A	—	[illegible]15			
C-1		E. min	♂	A	—	0021			

*diagnostic characters, parasites, etc.

ECI

ecology consultants, inc

RIO BLANCO SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.11-4

Location: [illegible] **Grid #:** 11 **Trap Night:** 4 **Checked By:** [illegible]

Date, Time Traps Set: 10-22-74 **Date, Time Traps Checked:** 10-23-74

Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		E. min.	♂	A		0100	R	Dead	
A-2		E. min	♂	A		0022			
A-4		E. min	♀	A		0050	R		
B-4		P. man	♀	A		0023			
B-6		E. min	♀	A		0004	R		
B-8		P. man	♂	A		0024			
B-9		E. min	♀	A		4000	R		
A-9		E. min	♂	A		0300	R		
C-13		E. min	♂	A		0040	R		
C-12		E. min	♂	A		0010	R		
[illegible]		P. man	♂	A		0001	R		
C-6		P. man	♂	A		0031			
C-7		E. min	♂	A		0025			
C-3		P. man	♀	A		0011	R		
C-1		E. min	♀	A		0012	R		

*diagnostic characters, parasites, etc.

ecology consultants, Inc

Rio blanco

5.1.2.11-5

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: [illegible] brush Grid #: 11 Trap Night: 5 Checked By: [illegible]

Date, Time Traps Set: [illegible]-79 Date, Time Traps Checked: [illegible]-79

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		P. maniculatus	♂	A	—	0032			
A-4		P. maniculatus	♂	A	—	0033			
A-4		P. man.	♀	A	—	0034			
B-5		E. minimus	♂	A	—	0035			
B-7		P. man.	♂	A	—	[illegible]			
A-7		E. min.	♀	A	—	0004	R		
C-13		E. min	♂	A	—	[illegible]	R		
C-6		E. min	♀	A	—	[illegible]	R		
C-3		P. maniculatus	♀	A	—	0011	R		

*diagnostic characters, parasites, etc.

ECI

TRACT MT. BRUSH

5.1.2.11-6

ECI ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

0001
0002
0003
0004
0005

0010
0020
0030
0040
[illegible]

0100
0200
0300
0400
1000

2000
3000
4000
0011
[illegible]

0013
0014
0015
[illegible]
0022

0023
0024
0025
[illegible]
0032

0033
0034
0035
[illegible]
0042

0043
0044
0045
0051
0052

0053
0054
0055
0101
0102

0103
0104
0105
0201
0202

0203
0204
0205
0301
0302

0303
0304
0305
0401
0402

0403
0404
0405
0110
0120

0130
0140
0150
0210
0220

0230
0240
0250
0310
0320

0330
0340
0350
0410
0420

0430
0440
0450
1001
1002

1003
1004
1005
1010
1020

1030
1040
1050
1100
1200

1300
1400
2001
2002
2003

2004
2005
2010
2020
2030

2040
2050
2100
2200
2300

2400
3001
3002
3003
3004

3005
3010
3020
3030
3040

3050
3100
3200
3300
3400

4001
4002
4003
4004
4005

4010
4020
4030
4040
4050

4100
4200
4300
4400
1011

1012
1013
1014
1015
1021

1022
1023
1024
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
1201

1202
1203
1204
1205
1301

1302
1304
1305
1401
1402

1403
1405
0111
0112
0113

0114
0115
0121
0122
0123

0124
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tract Mtn Brush Grid # 11 Project 83 Trap night 1

Date, time traps set 12/7/74 11:30 AM Date, time traps checked 12/8/74 12:10 AM

Last toe clip # used on previous day 0041 Checked by Sam, Ellinwood

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes

No Captures

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tract Mt. Brush Grid # 11 Project 83 Trap night 2

Date, time traps set 12/8/74 Date, time traps checked 12/9/74

Last toe clip # used on previous day 0041 Checked by Sanz, Ellswood

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		No Captures							

A-2- Empty -,
C-4- Tracks

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tract Mnt. Brush Grid # 11 Project 83 Trap night 3

Date, time traps set 12/9/74 Date, time traps checked 12/10/74

Last toe clip # used on previous day 0041 Checked by Ellinwood - Sany
Begin 0042

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
A-3		Lagurus curtatus	0042	♂	—	—			when dropped in snow, ran through it,

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tract Mt. Brush Grid # 11 Project 83 Trap night 4

Date, time traps set 12/10/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 0042
0043 Checked by Sanz, Ellenwood

Capt. loc.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		No	CAPTURES						

ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Tract Mt. Brush Grid # 11 Project 83 Trap night 5

Date, time traps set 12/11/74 Date, time traps checked 12/12/74

Last toe clip # used on previous day 0042 Checked by

Begin 0043

.pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-2	—	P. man.	0002	♀	A	—	—	—	

Grid 12 - Horse P-J/Sage (5.1.2.12)

2.1.2.12-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Horse P-J/Sage Grid #: ~~75~~ 12 Trap Night: I Checked By: WTT

ate, Time Traps Set: (0900) 10/19/74 Date, Time Traps Checked: 10/20/74 (0715)

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
7-2		Peromyscus maniculatus	♀	A	—	0001			bicolored tail
3-4		P. "	♀	A	—	0002			
4-7		P. "	♀	A		0003			
A-8		P. "	♂	A		0004			
-10		P. "	♀	A		0005			
11		P. "	♂	A		0010			
2		P. "	♀	A		0020			
		Eutamias minimus	♀	A		0030			h.f. 23mm dorsal stripes extend to base of tail
-7		P. maniculatus	♀	A		0040			

*diagnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.12-2

ocation: HORSE P-5/SAGE Grid #: ~~13~~ 12 Trap Night: 2 Checked By: WTT

ate, Time Traps Set: 10/20/74 (0915) Date, Time Traps Checked: (0910) 10/21/74

0050

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		P. maniculatus	♂	A		0050			bicolored tail
-5		E. minimus	♀	A		0030✓			dorsal stripes 5 extend to tail
-5		P. maniculatus	♀	A		0100			bicolored tail
B-7		P. "	♀	A		0040✓			" "
A-7		P. "	♀	A		0003✓			" " tail bl
A-8		P. "	♀	A		0200			" "
B-10		E. minimus	♀	A		0300			dorsal stripes 5 extend to tail
A-12		E. "	♂	A		0400			" "
A-13		P. maniculatus	♀	A		1000			bicolored tail [illegible]
C-10		E. minimus	♀	A		2000			5 [illegible] - extend to tail
5		E. "	♀	A		3000			" "
7		E. "	♂	A		4000			" " [illegible]
		P. maniculatus	♀	A		0001	✓		Bicolored tail

*diagnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET [illegible]

Location: Horse P-J / Sage Grid #: ~~13~~ 12 Trap Night: 3 Checked By: WTT

Date, Time Traps Set: 10/21/74 (0910) Date, Time Traps Checked: 10/22/74 (0915)

0011

Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		P. maniculatus	♂	A		0011	? in same		bicolored tail
A-2		P. "	♂	A		0050		trap	" "
A-3		P. "	♀	A		0012			" "
A-4		E. minimus	♂	A		0013			Sd. s. extend to tail
A-7		E. "	♂	A		4000	✓		" " "
A-9		E. "	♂	A		0014			" " "
B-10		E. "	♀	A		2000	✓		" " "
A-10		P. maniculatus	♂	A		0010	✓		bicolored tail
A-13		E. minimus	♂	A		3400	✓		S. s. extend to tail
C-11		E. "	♂	A		0015			" " "
C-1		P. maniculatus	♀	A		0021			bicolored tail
C-8		E. minimus	♀	A		0030	✓ DEAD		Side s. extend to tail

ostic characters, parasites, etc.

LIVE TRAPPING FIELD DATA SHEET 3.1.2.12-4

Location: Hors P-J/Sage Grid #: ~~13~~ 12 Trap Night: 4 Checked By: WTT

Date, Time Traps Set: 10/22/74 (0915) Date, Time Traps Checked: 10/23/74 (0957)

0022

n et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		P maniculatus	♀	A		0012	✓ DEAD		bicolored tail
A-4		E. minimus	♂	A		0013	✓ DEAD		5 ds extended to tail
A-5		P maniculatus	♀	A		0022	—		bicolored tail
A-9		P. "	♀	A		0020	✓ —		" "
B-10		P. "	♀	A		0023			" "
A-10		E. minimus	♀	A		2000	✓ removed		5 ds extended to tail
A-12		P maniculatus	♀	A		1000	✓		bicolored tail
A-13		P. "	♀	A		0024			" "
-10		E. minimus	♀	A		0300	✓		5 ds extended to tail
-9		E. "	♂	A		4000	✓		5 " "
3		E. "	(?) ♀	A		3000	✓ removed		5 " " "
3		E. "	♂	A		0025	removed		5 " " "

gnostic characters, parasites, etc.

ECI

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 2.1.2.12 5

ocation: [illegible] P-J / [illegible] Grid #: ~~13~~ 12 Trap Night: 5 Checked By: WTT

ate, Time Traps Set: 10/24/74 (0957) Date, Time Traps Checked: 10/25/74 (0910)
0031

Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
		E. minimus	♀			2000	} added from recapture data		
		E. "	♀			2000			
		E. "	♂			0025			
1-2		E. "	♂			0031			Side coded to tail
1-4		E. "	♀			0032			" " "
7		P. maniculatus	♀			0003	✓		[illegible]
10		E. minimus	♀			0015	✓ DEAD		side coded to tail
9		E. "	♀			0300	✓ DEAD		" " "

gnostic characters, parasites, etc.

ECI

ecology consultants, inc.

5.1.2.12-6

ECI
ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

~~0001~~
~~0002~~
~~0003~~
~~0004~~
~~0005~~

/20/74
~~0010~~
~~0020~~
~~0030~~
~~0040~~
~~0050~~

~~0100~~
/21/74 ~~0200~~
~~0300~~
~~0400~~
~~1000~~

~~2000~~
~~3000~~
4000
~~0011~~
~~0012~~

/22/74 ~~0013~~
~~0014~~
~~0015~~
~~0021~~
0022

/23/74 ~~0023~~
~~0024~~
~~0025~~
~~0031~~
/24/74 ~~0032~~

0033
0034
0035
0041
0042

0043
0044
0045
0051
0052

0053
0054
0055
0101
0102

0103
0104
0105
0201
0202

0203
0204
0205
0301
0302

0303
0304
0305
0401
0402

0403
0404
0405
0110
0120

0130
0140
0150
0210
0220

0230
0240
0250
0310
0320

0330
0340
0350
0410
0420

0430
0440
0450
1001
1002

1003
1004
1005
1010
1020

1030
1040
1050
1100
1200

1300
1400
2001
2002
2003

2004
2005
2010
2020
2030

2040
2050
2100
2200
2300

2400
3001
3002
3003
3004

3005
3010
3020
3030
3040

3050
3100
3200
3300
3400

4001
4002
4003
4004
4005

4010
4020
4030
4040
4050

4100
4200
4300
4400
1011

1012
1013
1014
1015
1021

1022
1023
1024
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
1201

1202
1203
1204
1205
1301

1302
1304
1305
1401
1402

1403
1405
0111
0112
0113

0114
0115
0121
0122
0123

0124
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Horse P-J/Sage Grid # 12 Project 83 Trap night 1

Date, time traps set 12/7 Date, time traps checked 12/8

Last toe clip # used on previous day 0032 Checked by JC / DM

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		— No CAPTURES —							

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Horse PJ/Sage Grid # 12 Project 83 Trap night 2

Date, time traps set 12/8 Date, time traps checked 12/9

Last toe clip # used on previous day 0032 Checked by JC / DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		no captures							

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Horse P.J./sage Grid # 12 Project 83 Trap night 3

Date, time traps set 12/9 Date, time traps checked 12/10

Last toe clip # used on previous day — Checked by JC/DM

Start @ 0103

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
C-10		P.man	0103	♂	A				
-12		P. maniculatus	0033	♂	A				

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ecology consultants, inc

Grid name Horse PJ/Sage Grid # 12 Project 83 Trap night 4

Date, time traps set 12/10 4:00 Date, time traps checked 12/11 400

Last toe clip # used on previous day 0033 Checked by JC / DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
D		P. man	0033	♂	ad				recap

[illegible]

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name horse PJ/Sage Grid # 12 Project 83 Trap night 5

Date, time traps set 12/11 430 Date, time traps checked 12/12 430

Last toe clip # used on previous day 0033 Checked by JC / DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
1-1		P man	0034	I	A				R
-5		P man	0100	♀					Recap
-6		P man	10004	♂					"
-6		P man	0107	♀					"
3-7		P man	0075	♀					
13-10		P man	0033	♂					Recap
1-6		P. man	0003	♀	A				
-10		P. man	0103	♂	A				
1-13		P. man	0200	♀	A				Dead
-10		P. man	0104	♀	A				

Grid 13 - Ridgetop Meadow (5.1.2.13)

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.75-1

Location: Ridgetop Meadow Grid #: 15 Trap Night: 1 Checked By: GTT

Date, Time Traps Set: (0300) 10/19/74 Date, Time Traps Checked: (1535) 10/20/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-8		E. minimus	♂	A		0001			

*diagnostic characters, parasites, etc.

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.7.2.13-2

ion: Ridgetop Meadow Grid #: 15 Trap Night: 2 Checked By: WTT

, Time Traps Set: 10/20/74 (1530 Date, Time Traps Checked: 10/21/74 (1010)

5002

ne et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		P. maniculatus	♂	A		0002			bicolored tail
3-5		P. "	♀	A		0003			" "
B-3		P. "	♀	A		0004			" "
C-1		P. "	♀	A		0005			" "
A-12		P. "	♂	A		0010			" "
-11		P. "	♂	A		0020			" "
-6		P. "	♂	A		0030			" "

*diagnostic characters, parasites, etc.

ECI

2.1.2.15-3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Ridgetop Meadow Grid #: 15 Trap Night: 3 Checked By: WTT

Date, Time Traps Set: 10/21/74 (1610) Date, Time Traps Checked: 10/22/74 (1545)

0040

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
		No Captures							

*diagnostic characters, parasites, etc.

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.13-4

Location: [illegible] Grid #: 15 Trap Night: 4 Checked By: WTT

Date, Time Traps Set: 12/22/74 (1545) Date, Time Traps Checked: 12/23/74 (1055)

0040

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-10		P. maniculata	♀	A		0035	R		bicolored tail
A-11		P. "	♀	A		0040			" "

*diagnostic characters, parasites, etc.

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.13-5

ocation: [illegible] Meadows Grid #: 15 Trap Night: 5 Checked By: WTT

ate, Time Traps Set: 12/23/74 (1058) Date, Time Traps Checked: (1530) 12/24/74

2250

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
		No CAPTURES							

tic characters, parasites, etc.

5.1.2.13-6

ECI
ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

1/20/70
~~0001~~
~~002~~
~~0003~~
~~0004~~
~~0005~~
1/21/71
~~0010~~
~~0020~~
~~0030~~
23/7[illegible] ~~0040~~
0050
0100
0200
0300
0400
1000
2000
3000
4000
0011
0012
0013
0014
0015
0021
0022
0023
0024
0025
0031
0032
0033
0034
0035
0041
0042
0043
0044
0045
0051
0052
053
54
55
1
2

0103
0104
0105
0201
0202
0203
0204
0205
0301
0302
0303
0304
0305
0401
0402
0403
0404
0405
0110
0120
0130
0140
0150
0210
0220
0230
0240
0250
0310
0320
0330
0340
0350
0410
0420
0430
0440
0450
1001
1002
1003
1004
1005
1010
1020

1030
1040
1050
1100
1200
1300
1400
2001
2002
2003
2004
2005
2010
2020
2030
2040
2050
2100
2200
2300
2400
3001
3002
3003
3004
3005
3010
3020
3030
3040
3050
3100
3200
3300
3400
4001
4002
4003
4004
4005
4010
4020
4030
4040
4050

4100
4200
4300
4400
1011
1012
1013
1014
1015
1021
1022
1023
1024
1025
1031
1032
1033
1034
1035
1041
1042
1043
1044
1045
1051
1052
1053
1054
1055
1101
1102
1103
1104
1105
1201
1202
1203
1204
1205
1301
1302
1304
1305
1401
1402

1403
1405
0111
0112
0113
0114
0115
0121
0122
0123
0124
0125
0131
0132
0133
0134
0135
0141
0142
0143
0145
0151
0152
0153
0154
0155
0211
0212
0213
0214
0215
0221
0222
0223
0224
0225
0231
0232
0233
0234
0235
0241
0242
0243
0244

0245
0251
0252
0253
0254
0255
0311
0312
0313
0314
0315
0321
0322
0323
0324
0325
0331
0332
0333
0334
0335
0341
0342
0343
0344
0345
0351
0352
0353
0354
0355
0411
0412
0413
0414
0415
0421
0422
0423
0424
0425
0431
0432
0433
0434

0435
0441
0442
0443
0444
0445
0451
0452
0453
0454
0455
1111
1112
1113
1114
1115
1121
1122
1123
1124
1125
1131
1132
1133
1134
1135
1141
1142
1143
1144
1145
1151
1152
1153
1154
1155
1211
1212
1213
1214
1215
1221
1222
1223
1224

1225
1231
1232
1233
1234
1235
1241
1242
1243
1244
1245
1251
1252
1253
1254
1255
1311
1312
1313
1314
1315
1321
1322
1323
1324
1325
1331
1332
1333
1334
1335
1341
1342
1343
1344
1345
1351
1352
1353
1354
1355
1411
1412
1413
1414

1415
1421
1422
1423
1424
1425
1431
1432
1433
1434
1435
1441
1442
1443
1444
1445
1451
1452
1453
1454
1455
2111
2112
2113
2114
2115
2121
2122
2123
2124
2125
2131
2132
2133
2134
2135
2141
2142
2143
2144
2145
2151
2152
2153
2154

3.1.2.13

ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Ridgetop Meadow Grid # 13 Project 83 Trap night 1

Date, time traps set 12/7/74 1400 Date, time traps checked 12/8/74 1500

Last toe clip # used on previous day ——— Checked by JB / TT
Start w/ 0103

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
11		Visit - weasel							
5		" "							
1		Visit mouse							

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Ridgetop Meadow Grid # 13 Project 83 Trap night 2

Date, time traps set 12/8/74 1500 Date, time traps checked 12/9/74 1330

Last toe clip # used on previous day 0040 Checked by JB / TT

pt. cc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		NO CAPTURES							

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Ridgetop Meadow Grid # 13 Project 83 Trap night 3

Date, time traps set 12/9/74 1330 Date, time traps checked 12/10 1400

st toe clip # used on previous day 0040 Checked by SS | JJ

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		No captures							

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Ridge top Meadow Grid # 13 Project 83 Trap night 4

Date, time traps set 12/10/74 1400 Date, time traps checked 12/11/74 1145

Last toe clip # used on previous day 0040 Checked by JB/RDM

next - 0050

apt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		NO CAPTURES							

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Ridgetop Meadow Grid # 13 Project 83 Trap night 5

Date, time traps set 12/11/74 1145 Date, time traps checked 1200 12/12/74

Last toe clip # used on previous day 0040 Checked by Turner

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		- NO CAPTURES -							

Grid 14 - Greasewood Sage (5.1.2.14)

1 of 3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

5.1.2.14-1

Location: [illegible] Site   Grid #: A   Trap Night: #1   Checked By: Sanz, Kestr

Date, Time Traps Set: 10-19-74   Date, Time Traps Checked: 10-20-74 A.M.

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-1		Peromyscus maniculatus	♂	A	—	0001			bicolored tail
-1		Eutamias minimus	♀	A	—	0002			5 dark stripes not to [illegible] 25 - hf
-1		Eutamias minimus	♀	A	–	0003			27 - hf 5 [illegible]
-1		Eutamias minimus	♂	A	–	0004			27 hf "
-1		Eutamias minimus	♂	A	–	0005			26 hf "
2		P. maniculatus	♂	A	—	0010			hf 19 tail [illegible]
-2		P. maniculatus	♀	A	—	0020			hf 17 t- 1.7
-2		P. maniculatus	♀	A	—	0030			hf 18 t 1.4
-2		E. minimus	♂	A	–	0040			[illegible]
-2		P. maniculatus	♂	A	–	0050			hf 19 t-61
		E. minimus	♂	A	—	0100			st. b.[illegible] h.f 19
F-3		P. maniculatus	♂	[illegible]	—	0200			h.f. 17 t 6[illegible]
H-3		P. maniculatus	♀	A	–	0300			h.f. 17 t 62
J-3		M. longicaudis ✓	♂	A	–	0400	NECRO		tail > [illegible] body
L-3		E. minimus	♀	A	–	1000			h.f. 25 [illegible]
M-3		P. maniculatus	♂	A	—	2000			h.f. 1[illegible]
M-4		P. maniculatus	♀	A	-	3000			hf 17 t [illegible] 60
L-4		E. minimus	♀	A	—	4000			h.f. 26
K-4		E. minimus	♂	A	—	0011			h.f. 26 [illegible]
D-4		P. maniculatus	♂	A	—	0012			h.f. 1[illegible] t [illegible]
A-4		E. minimus	♂	A	–	0013			h.f. 27 [illegible]
-6		P. maniculatus	♀	A?		0014	/		[illegible]
		P. maniculatus	♂	A		[illegible]			19 t [illegible]
-6		P. maniculatus	♂	A		[illegible]			hf 19 t-1.7
-6		P. maniculatus	♂	A		[illegible]			hf 17 t [illegible]

*diagnostic characters, parasites, etc.

ECI

2of3 SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.14-2

cation: [illegible] Grid #: ________ Trap Night: #1 Checked By: Sanz

te, Time Traps Set: 10/19/74 Date, Time Traps Checked: 10/20/74

ne e:	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-6		P. maniculatus	♀	A	—	0023			hf 17 t 52
-6		E. [illegible]	♂	A	—	0024			shot hf 26
-5		P. maniculatus	♂	A	—	0025			t 50 hf 19
8		P. maniculatus	♀	[illegible]	—	0031			t. 56 hf 19
8		M. longicaudus ✓	♂	A	—	0032			t > [illegible]
-8		E. minimus	♀	A	—	0033			sbot hf 25
7		P. maniculatus	♀	A	—	0034			hf 17 . t 54
-7		E. minimus	♂	A		0035			hf. 28 t.bot
-10		E. minimus	♂	A	—	0041			hf 26 sbot
-9		P. maniculatus	♂	A	—	0042			hf 19 t-60
		E. minimus	♂	A	—	0043			sbot hf 27
-10		E. minimus	♀	A		0044			sbot hf 26
-9		M. longicaudus ✓	♂	A		0045			[illegible]
-10		P. maniculatus	♂	A		0051			t-[illegible] [illegible]
-10		E. minimus	♀	A		0052			sbot hf 24
-10		P. maniculatus	♀	A		0053			t-40 hf 19
-11		E. minimus	♀	A		0054			sbot hf 26
-11		E. minimus	♀	A		0055			SBOT hf 27
-11		E. minimus	♂	A		0101			SBOT hf 25
-11		P. maniculatus	♀	A		0102			t=57 hf19
-11		E. minimus	♂	A		0103			hf-27 SBOT
-12		P. maniculatus	♂	A		0104			t=55 hf-16
		E. minimus	♀	A		0105			sbot hf 26
-12		E. minimus	♂	A		0201			shot hf 27
-12		E. minimus	♀	A		0202			sbot hf 26

*diagnostic characters, parasites, etc.

ECI

1 3 of 3

5.1.2.14 – 3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Grass and Sage Grid #: ______ Trap Night: 1 Checked By: [illegible]

Date, Time Traps Set: 10/19/74 Date, Time Traps Checked: 10/20/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
F-12		P. maniculatus	♂	A	—	02[illegible]	—	—	hf-11, t-57
J-12		E. minimus	♂	A	swollen testis	0204	—		SPOT hf-28
L-13		P. maniculatus	♂	A	—	0205	—	—	hf-18 t-60
H-13		P. maniculatus	♀	A	—	0301	—	—	hf-17 t-57
D-13		P. maniculatus	♀?	A	—	[illegible]	=1302	—	hf-17 t-55
C-13		E. minimus	♂	A	—	0202(?)	—	—	SPDT hf-26
-13		E. minimus	♀	A	—	0303	—	—	SPDT hf-27

*diagnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.14-4

Location: [illegible] cave Grid #: ______ Trap Night: #2 Checked By: Sainz

Date, Time Traps Set: 12:20:74 Date, Time Traps Checked: [illegible]-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		E. minimus	♂	A	—	0304			5 lines to b.n.t.
D-1		P. maniculatus	♀	A	—	0030	R		bicolored tail
F-1		E. minimus	♀	A	—	0305			5 lines to b.n.t.
H-1		P. maniculatus	♀	A	—	0401			bicolored tail
K-1		E. [illegible]	♀	A	—	0402			
M-1		P. maniculatus	♀	A	—	0403			
M-2		E. minimus	♀	A	—	1000	R		
-2		P. maniculatus	♂	A	—	0404			
-2		E. minimus	♀	A	—	2002	R		
-2		E. minimus	♂	A	—	0405			
		P. maniculatus	♀	Juv	—	0110			
-2		E. minimus	♀	A	—	0120			
-2		E. minimus	♀	A	—	0130			
-3		P. maniculatus	♂	A	—	0140			
B-3		E. minimus	♂	A	—	0013	R		
-3		E. minimus	♂	A	—	0100	R	Necro	
-3		P. maniculatus	♀	A	—	0150		Necro	
-3		E. [illegible]	♀	A	—	2002	R		
-3		P. maniculatus	♀	A	—	0210			
M-3		E. minimus	♂	A	—	0220			
-4		[illegible]	♂	A	—	0230			
-4		E. minimus	♂	A	—	0240			
		E. minimus	♂	A		0024	R		
-4		P. maniculatus	♂	A		0022	R		
-4		E. minimus	♀	A		0250			

* diagnostic characters, parasites, etc.

39

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

5.1.2.14 - 5

Location: Greenwood - Sage Grid #: Trap Night: 2 Checked By: Sanz

Date, Time Traps Set: 10-20-74 Date, Time Traps Checked: 10-21-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
D-4		P. maniculatus	♂	A	—	0012	R	Necro	
B-4		P. maniculatus	♂	A	—	0015	R		
A-4		P. maniculatus	♀	A	—	0310			
D-5		E. minimus	♂	A	disi-ted.	0041	R		
E-5		E. minimus	♀	A	—	0320			
F-5		E. minimus	♂	A	—	0040	R		
H-5		E. minimus	♂	A	—	0004	R		
I-5		E. minimus	♀	A	—	4000	R		
J-5		E. minimus	♀	A	—	1330			
G-6		P. maniculatus	♂	[illegible]	—	[illegible]	R		
[illegible]-6		P. maniculatus	♀	A	—	0023	R		
C-6		P. maniculatus	♂	A	—	0021	R		
B-6		E. minimus	♂	A	—	0240			
A-6		P. maniculatus	♀		—	0214	R		

*diagnostic characters, parasites, etc.

5.1.2.14-6

SMALL M AL LIVE TRAPPING FIELD DATA S T

Location: Greenwood [illegible] Grid #: A Trap Night: 2 Checked By: [illegible]

Date, Time Traps Set: 10/20/1211 Date, Time Traps Checked: 10/21/94

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-13		P. maniculatus	♂	A		1020			
-13		[illegible]	♂	A		1040			[illegible]
-13		E. minimus	♀	A		1050			hf 27
-12		P. maniculatus	♂	A	[illegible]	1302	R		
-13		P. maniculatus	♀	A		1100			
J-13		E. minimus	♀	A		[illegible]	R		[illegible] hf 27
-13		P. maniculatus	♂	A		0205	R		
-12		E. minimus	♂	A		0013	R		hf 27
-12		E. minimus	♂	A		[illegible]			hf 27
[illegible]		E. minimus	♀	A		[illegible]	R		hf 26
-13		P. maniculatus	♀	A		[illegible]	R		
D-11		P. maniculatus	♀			[illegible]	R		
E-11		P. maniculatus	♂	A		1300			
-11		E. minimus	♀	A		[illegible]	R		hf 26
J-11		P. maniculatus	♀	A		0301	R		
-11		E. minimus	♂	A		1400			hf 27
-11		P. maniculatus	♂	A		[illegible]			
-11		E. minimus	♀	A		[illegible]			hf 26
M-10		P. maniculatus	♀	A		0053	R		
K-10		P. maniculatus	♂	A		[illegible]	R		
J-10		E. minimus	♀	A		0055	R		
H-10		P. maniculatus	♀	A		2003			
-10		[illegible]	[illegible]	A		0044	R		
F-10		P. maniculatus	♂	A		[illegible]	R		
D-10		[illegible]	♂	A		2004			t-50 body 104

*diagnostic characters, parasites, etc.

5.1.2.14-7

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: [illegible] Grid #: 4 Trap Night: 2 Checked By: [illegible]

Date, Time Traps Set: [illegible] Date, Time Traps Checked: [illegible]

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
C-10		E. [illegible]	♂	A		0101	R		
B-10		E. [illegible]	♀	A		0202	R		
-10		E. minimus	♀	A		0105	R		
-9		E. minimus	♂	A		0204	R		
-9		E. minimus	♂	A		0013	R		
9		P. maniculatus	♂	A		2005			
9		E. minimus	♀	A		0033	R		
8		P. maniculatus	♂	A		2010			
8		E. minimus	♂	A		2020			
-8		E. minimus	♀	A		0035	R		
		E. minimus	♀	A		2030			
-7		E. minimus	♀	A		2040			
-7		P. maniculatus	♀	A		0034	R		
-7		M. longicaudus	♂	A		2050			tail 48 body 95
-7		M. l[illegible]	♂	A		2100			tail 55 body 111
-7		E. minimus	♂	A		1202	R		

*diagnostic characters, parasites, etc.

ecology consultants

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.14-8

Location: [illegible] Grid #: A Trap Night: 3 Checked By: [illegible]

Date, Time Traps Set: 10-21-74 Date, Time Traps Checked: 10-22-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-3		E. [illegible]	♂	A	—	2013	R		
A-4		P. maniculatus	♀	A	—	0210	R		
[illegible]-4		P. [illegible]	♀	A	—	[illegible]	R		
A-12		E. minimus	♀	A	—	1050	R		
C-13		E. minimus	♀	A	—	0303	R		
B-13		E. minimus	♂	A	—	030(?)	R	Necro	
-13		P. maniculatus	♀	A	—	2202			
-13		P. maniculatus	♂	A	—	0042	R		
-13		E. minimus	♀	A	—	0054	R	Necro	
L-13		P. maniculatus	♂	A	—	2300			
		P. maniculatus	♂	A	—	0205	R	Necro	
D-12		P. maniculatus	♂	A	—	1302	R		*
B-12		E. minimus	♂	A	—	[illegible]	R		
H-11		P. maniculatus	♂	A	—	1322	R		*
J-11		P. maniculatus	♂	A	—	2400			
L-11		P. maniculatus	♂	A	—	1300	R		
M-11		E. minimus	♂	A	—	3001			
M-10		E. minimus	♀	A	—	3002	R		
K-10		M. longicaudus	♂	A	-	3002			T.L= 165 mm - t= 60
J-10		P. maniculatus	♂	A	—	[illegible]	R		
J-9		M. longicaudus	♂	A	-	003			TL. 155 mm - t: 55
H-10		E. minimus	♂	A	—	0042	R		
		E. minimus	♂	A	—	1200	R		
F-10		E. minimus	♀	A	—	2044	R		
E-9		E. minimus	♂	A	—	0101	R		

*diagnostic characters, parasites, etc.

ECI

SMALL MMAL LIVE TRAPPING FIELD DATA ET 5.1.2.14-9

Location: Greasewood-Sage Grid #: A Trap Night: 3 Checked By: [illegible]

Date, Time Traps Set: 10-20-74 Date, Time Traps Checked: 10-21-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
E-10		E. minimus	♀	A	—	2004			
D-10		P. maniculatus	♀	A	—	3005			
D-9		E. minimus	♀	A	—	0202	R		
B-10		E. minimus	♀	A	—	0105	R		
A-8		E. minimus	♀	A	—	2030	R		
C-8		E. minimus	♂	A	—	0041	R		
F-8		P. maniculatus	♀	A	—	0102	R		
H-9		M. longicaudus	♂	A	—	3010			
L-8		P. maniculatus	♀		—	3020	Dead		
M-8		P. maniculatus	♂	A	—	3030			
		M. longicaudus	♂	A	—	2050	R		
H-7		M longicaudus	♂			2100	?	Dead	
F-7		P. maniculatus	♀	A	—	2030	R		
E-7		P. maniculatus	♂	A	—	2040			

*diagnostic characters, parasites, etc.

ECI

5.1.2.14-10

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: [illegible] Sac: Grid.#: A Trap Night: 3 Checked By: [illegible]

Date, Time Traps Set: 1[illegible]/[illegible]/[illegible] 0350 Date, Time Traps Checked: 10/22/[illegible]

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-1		E. minimus	♂	A		03 50			
D-1		E. minimus	♀?	A		04 10			
F-1		E. minimus	♀	A		00 03	R		
H-1		E. minimus	♀	A		03 25	R		
K-1		E. minimus	♂	A		00 05	R		necro
L-1		P. maniculatus	♂	A		04 20			
M-1		E. minimus	♂	A		04 [illegible]	–		[illegible]
M-2		E. minimus	♂	A		00 0[illegible]	R		
L-2		M. longicaudus	♀	A		[illegible]			necro
J-2		P. maniculatus	♀	A		04 50			necro
F-2		E. minimus	♂	A		00 11	R		
D-2		E. minimus	♂	A		10 01			
C-2		E. minimus	♀	A		00 02	R		
A-2		E. minimus	♂	A		03 04	R		necro
A-3		E. minimus	♂	A		10 02			
B-3		E. minimus	♀	A		01 [illegible]	R		
[illegible]									[illegible] toe clip, [illegible] trap
D-3		[illegible]	♂	A		10 03			
F-3		P. maniculatus	♀	A		10 04			
H-3		E. minimus	♀	A		02 20	R		
J-3		P. maniculatus	♀	A		02 10	R		
L-3		E. minimus	♀	A		1[illegible] [illegible]0	R		
[illegible]-3		E. minimus	♂	A		02 20	R		necro
K-[illegible]		E. minimus	♂	A		02 40	R		
T-[illegible]		E. minimus	♂	A		00 04	R		

*diagnostic characters, parasites, etc.

5.1.2.14 – 11

SMALL [illegible]MAL LIVE TRAPPING FIELD DATA [illegible]ET

Location: [illegible] Grid #: A Trap Night: 3 Checked By: [illegible]

Date, Time Traps Set: 10/21/74 Date, Time Traps Checked: 10/22/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-4		P. maniculatus	♀	A		00 20	R		
4		P. maniculatus	♂	A		00 15	R		
-5		E. minimus	♂	[illegible]		03 20	R		
-5		M. longicaudus	♂	A		10 25			
5		E. minimus	♀	A		03 30	R		
6		E. minimus	♂	A		20 20	R		
6		E. minimus	♂	A		12 22	R		
6		E. minimus	♂	A		10 10			
E-6		E. minimus	♀	A		00 35	R		
[illegible]		P. maniculatus	♀	A		00 23	R		
C-6		E. minimus	♀	A		20 20	R		
B-6		E. minimus	♂	A		03 20	R		
A-6		P. maniculatus	♀	A		00 21	R		
D-7		M. longicaudus	♀	A		00 32	R		[illegible]

Rio Blanco SMALL ANIMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.14-12

Location: Grassland - Sage Grid #: A Trap Night: 4 Checked By: Sanz

Date, Time Traps Set: 10-22-74 Date, Time Traps Checked: 10-22-74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-1		E. min.	♂	A	—	3050			
B-1		E. min	♂	A	—	0405	R		
F-1		E. min	♀	A	—	0305	R		
H-1		E. min	♂	A	—	1021	R		
2		P. man	♂	A	—	0010	R		
2		E. min	♂	A	—	3100			
2		E. min	♀	A	—	[illegible]	R		
2		E. min	♂	A	—	0350	R		
C-2		P. man	♂	A	—	3200			
A-3		E. min	♂	A	—	1002	R		
3		E. min	♀	A	—	0003	R		
D-3		E. min	♂	A	—	3300			
J-3		M. [illegible]	♂	A	—	2400			
L-3		P. man	♂	A	—	0404	R		
M-3		P. man	♂	A	—	4101	●		
-4		P. man	♀	A	—	0210	R		
H-5		E. min	♂	A	—	1010	R		
-4		P. man	♂	A	—	0022	R		
-4		P. man	♂	A	—	1003	R		
E-4		E. min	♂	A	—	0011	R		
F-5		E. min	♀	A	—	[illegible]	R		
D-5		P. man	♂	A	—	[illegible]	●		
		E. min	♂	A	—	[illegible]	R		
B-4		E. min	♂	A	—	0013	R		
A-4		E. min	♀	A	—	0130	R		

*diagnostic characters, parasites, etc.

ECI

RIO BLANCO SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.14-13

Location: [illegible] Grid #: A Trap Night: 4 Checked By: [illegible]

Date, Time Traps Set: 10-30-78 Date, Time Traps Checked: [illegible]

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-6		P. man	♂	D	—	4301	●		
G-6		E. min	♂	A	—	[illegible]41	R		—
J-5		E. min	♂	A	—	0024	R		
J-6		E. min	♀	A	—	4000	R	Necro	
L-6		E. min	♂	A	—	2020	R		
M-4		E. min	♂	A	—	1200	R		
I-7		E. min	♀	A	—	0033	R		
G-7		E. min	♂	A	—	3204	\R		
F-7		M. [illegible]	♂	A	—	1020	\		

*diagnostic characters, parasites, etc.

ECI

5.1.2.14-14

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Greasewood Sag Grid #: A Trap Night: 4 Checked By: K[illegible]

Date, Time Traps Set: 10/22/74 Date, Time Traps Checked: 10/23/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
13		E. minimus	♂	A		4100			
-13		E[illegible]	♂	A		[illegible]	r		
-13		E[illegible]	♀	A		0203	r		
-13		P. maniculatus	♀	A		1201			New capture - out of order
2		P[illegible]	♀?	A		[illegible]	r		
		E minimus	♀?	[illegible]		[illegible]			
2		P[illegible]	♀	A		[illegible]	r		
12		E[illegible]	♀	A		[illegible]	r		
-11		P. maniculatus	♀	A		[illegible]			
-11		P[illegible]	♂	A		[illegible]	r		
-11		P. maniculatus	♀	A		0301	r		
-11		E. min[illegible]	[illegible]	A		[illegible]	r		
1-1		[illegible]	♀	A		4400			
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	[illegible]	R		
-10		M[illegible]	[illegible]	A		1011			
1-10		E[illegible]	♀	A		[illegible]044	r		
-10		E[illegible]	♂	A		0101			
-10		[illegible]	[illegible]	A		2004	r		
-10		P[illegible]	♂	A		0104	r		
-9		P. maniculatus	♀	A		1012			
-9		E. minimus	♂	A		1202	r		
-9		P[illegible]	[illegible]	A		1302	r		
		P. maniculatus	♀	A		1013			
-8		P[illegible]	♀	A		2003	r		
-8		E. minimus	♂	A		[illegible]	r		

*diagnostic characters, parasites, etc.

5.1.2.14-75

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: [illegible] Grid #: A Trap Night: 1 Checked By: [illegible]

Date, Time Traps Set: 10/03/74 - 0 5. 10/4 Date, Time Traps Checked: 1/03/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~♀~~	~~A~~		~~[illegible]~~	r		
~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~	~~[illegible]~~		~~[illegible]~~	r		
D-9		E. minimus	♀	A		0105	r		
A-8		E. minimus	♀	A		2030	r		
E-7		E. minimus	♀	A		014	·		

*diagnostic characters, parasites, etc.

ECI

ecology consultants, inc.

SMALL MMAL LIVE TRAPPING FIELD DATA ET

Location: [illegible] Grid #: A Trap Night: 5 Checked By: [illegible]

Date, Time Traps Set: 10-23-74 Date, Time Traps Checked: [illegible]

ne Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
1H		E. minimus	♀			0350	R		
F-1		E. min	♀			0305	R		
H-1		E. min	♀			0003	R		
L-1		E. min	♀			4001			
M-2		E. min	♂			0004	R		
-2		E. min	♂			0011	R		
-2		P. maniculatus	♀			0030	R		
-2		E. minimus	♂			0013	R		
A-3		P. maniculatus	♀			4002			
A-6		E. minimus	♀			2030	R		
[illegible]		E. min	♂			0340	R	—	
B-4		E. min	♂			0041	R		
K-4		E. min	♂			1202	R		
I-4		P. maniculatus	♂			0023	R		
-5		E. minimus	♂			0040	R		
-5		P. maniculatus	♂			0230	R		
-4		P. man	♀			4003			
-4		P. man	♂			1003	R		
-5		E. minimus	♂			3100	R		
D-5		P. man	♂			0025	R		
D-4		P. man	♀			0020	R		
D-6		E. min	♀			0320	R		
[illegible]		E. min	♂			3001	R		
[illegible]		E. min	♀			0330	R		
-6 -6		E. min E. min	♂			0034 0240	R R		

*diagnostic characters, parasites, etc.

S.1.2.14-17

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: [illegible] Grid #: A Trap Night: [illegible] Checked By: [illegible]

ate, Time Traps Set: [illegible] Date, Time Traps Checked: [illegible]

et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	~~1028~~	[illegible]	[illegible]	~~Note~~
-13		E. min	♂	A		1203			
-13		P. man	♀	A		2200	R		
-13		E. min	♀	A		2040	R		
-13		P. man	♀	A		0801	R		
-12		P. maniculatus	♂	A		1015			
[illegible]		P. maniculatus	♀	A		1021			
11		P. maniculatus	♂	A		01041	R		
-11		E. [illegible]	♂	A		1101	R		
-11		P. maniculatus	♂	A		3030	R		
[illegible]		P. maniculatus	♀	A		1022			
-10		E. [illegible]	♂	A		2020	R		
K-10		P. maniculatus	♀	A		1023			
J-10		P. maniculatus	♂	A		2010	R		
B-10		E. [illegible]	♀	J		2105	R		
-9		E. minimus	♂	A		[illegible]3	R		[illegible]
H-9		E. minimus	♀	J		0044	R		
M-8		P. maniculatus	♂	A		1024			
H-8		M. longicaudus	♂	A		3010	R		
D-8		[illegible]	♂	A		102[illegible]			

*diagnostic characters, parasites, etc.

ECI

ecology consultants, Inc

5.1.2.14-18

SMALL [illegible]MAL LIVE TRAPPING FIELD DATA [illegible]ET

Location: [illegible] Grid #: ________ Trap Night: 5 Checked By: ________

Date, Time Traps Set: [illegible]-23-74 Date, Time Traps Checked: ________

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-1		E. min	♂	A	—	0350	R		
A-1		E. min	♂	"	—	3050	R		

agnostic characters, parasites, etc.

ECI

GREASEWOOD - SAGE

5.1.2.14-19 ECI
ecology consultants, inc

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

~~00[illegible]~~
~~00[illegible]2~~
~~00[illegible]3~~
~~00[illegible]~~
~~00[illegible]~~

~~00[illegible]0~~
~~00[illegible]0~~
~~00[illegible]0~~
~~00[illegible]0~~
~~00[illegible]~~

~~01[illegible]~~
~~02[illegible]~~
~~03[illegible]~~
~~04[illegible]~~
~~10[illegible]~~

~~20[illegible]~~
~~30[illegible]0~~
~~40[illegible]0~~
~~00[illegible]1~~
~~0[illegible]2~~

~~0[illegible]3~~
~~0[illegible]4~~
~~0[illegible]5~~
~~0[illegible]1~~
~~0[illegible]2~~

~~0[illegible]3~~
~~0[illegible]4~~
~~0[illegible]5~~
~~0[illegible]1~~
~~0[illegible]2~~

~~0[illegible]3~~
~~0[illegible]4~~
~~0[illegible]5~~
~~0[illegible]1~~
~~0[illegible]2~~

~~0[illegible]3~~
~~0[illegible]4~~
~~0[illegible]5~~
~~0[illegible]1~~
~~0[illegible]2~~

~~00[illegible]~~
~~00[illegible]~~
~~00[illegible]~~
~~01[illegible]~~
~~01[illegible]~~

~~0[illegible]3~~
~~0[illegible]4~~
~~0[illegible]5~~
~~0[illegible]1~~
~~0[illegible]2~~

~~0[illegible]3~~
~~0[illegible]4~~
~~0[illegible]5~~
~~0[illegible]1~~
~~0[illegible]2~~ 1302

[illegible]
~~0[illegible]4~~
~~0[illegible]5~~
~~0[illegible]1~~
~~0[illegible]2~~

~~0[illegible]3~~
~~0[illegible]4~~
~~0[illegible]5~~
~~01[illegible]0~~
~~01[illegible]0~~

~~01[illegible]0~~
~~01[illegible]~~
~~01[illegible]~~
~~02[illegible]0~~
~~02[illegible]0~~

~~0[illegible]0~~
~~0[illegible]0~~
~~0[illegible]50~~
~~0[illegible]10~~
~~0[illegible]20~~

~~0[illegible]0~~
[illegible]
~~03[illegible]0~~
~~04[illegible]0~~
~~04[illegible]0~~

~~0[illegible]0~~
~~0[illegible]0~~
~~04[illegible]0~~
~~10[illegible]1~~
~~10[illegible]2~~

~~10[illegible]3~~
~~1[illegible]4~~
~~1[illegible]5~~
[illegible]
[illegible]

~~10[illegible]0~~
~~10[illegible]0~~
~~1[illegible]0~~
~~1[illegible]0~~
~~1[illegible]0~~

~~1[illegible]0~~
~~1[illegible]0~~
~~20[illegible]1~~
~~20[illegible]2~~
~~20[illegible]3~~

~~20[illegible]4~~
~~20[illegible]5~~
~~20[illegible]0~~
~~2[illegible]0~~
~~2[illegible]0~~

~~2[illegible]0~~
~~2[illegible]0~~
[illegible]
~~2[illegible]0~~
~~2[illegible]0~~

~~2[illegible]0~~
~~30[illegible]1~~
~~30[illegible]2~~
~~30[illegible]3~~
~~30[illegible]4~~

~~30[illegible]5~~
~~3[illegible]10~~
~~3[illegible]20~~
~~3[illegible]30~~
[illegible]

~~3[illegible]50~~
~~3[illegible]0~~
~~32[illegible]0~~
~~33[illegible]0~~
[illegible]

~~4[illegible]01~~
~~4[illegible]02~~
[illegible]
4004
4005

4010
4020
4030
4040
4050

~~41[illegible]~~
~~42[illegible]0~~
~~4[illegible]0~~
~~4[illegible]0~~
~~1[illegible]1~~

~~1[illegible]2~~
~~1[illegible]3~~
[illegible]
~~1[illegible]5~~
~~1[illegible]1~~

~~1[illegible]2~~
~~1[illegible]3~~
[illegible]
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
[illegible]

1202
1203
1204
1205
1301

[illegible]
1302 sc
1304
1305
1401
1402

1403
1405
0111
0112
0113

0114
0115
0121
0122
0123

0124
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

Δ 4101 ♂ P.M
4201 ♂ P.m
4301 - ♂ P m

130(7)

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Greasewood-Sage Grid # A Project 83 Trap night 1

Date, time traps set Dec 7, 1974 11:00 Date, time traps checked Dec 8, 1974 11:00

Last toe clip # used on previous day 4003 Checked by Sang / Ellinwood

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-5		Peromyscus man.	4004	♂	A	—	—	—	
-9		P. man.	0302	♂	A	—			
-9		Microtus longicaudus	3010	♀?	A	—	—	—	Tail - 61m T = 166
4		P. man.	2000	♂	A	—	—	—	
-3		Micro. longicaudus	4005	~~♂~~♀	A		Necro		Tail 55 - T = 111
-1		P. man.	4010	♀	A	—			

ecology consultants, inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Greasewood - sage Grid # A Project 83 Trap night 2

Date, time traps set 12/8/74 Date, time traps checked 12/9/74

Last toe clip # used on previous day 4010 Checked by Sanz, Ellinwood

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		P. man.	4010	♀	A	—	—	—	—
-4.		P. man.	2000	♂	A	—	—	—	—
13		P. man	1003	♂	A	– Check	ē October data		
-10		Mic. Montanus	4020	♀	A	—	DO NOT	USE FOR	RECAPTURE DATA

3.1.2.14-22

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Greenwood-Sage Grid # A Project 83 Trap night 3

Date, time traps set 12/9/74 Date, time traps checked 12/10/74

Last toe clip # used on previous day 4020 Checked by Ellinwood - Sany

Begin - 4030

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		Peromyscus maniculatus	1004	♀	A	—			
-2		P. man. ?	4010	♀	A	—			[illegible]
-4		Microtus montanus ?	1005	♂	—				Tail 43 TGL (est) 13 [illegible]
-6		P. man.	0023	♀	—				
-11		P. man	0102	♀					
-9		M. long. ?	2050	♂					Tail – 53 TBL – 155
-13		P. man.	0301	♀					
-13		P. man.	1003	♂	- Check ō Old Data				Toes hard [illegible]

ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Greasewood - sage Grid # A Project 83 Trap night 4

Date, time traps set 12/10/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 4020 begin 4030 Checked by Sanz, Ellenwood

pt. oc.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-2		P. man	1004	♀	A	—	—	—	
-4		P. man	0015	♂	A				
-10		mic. longicaudus	3010	♂?	A				Tail 5.9cm T-16.
-11		P. man	0102	♀	A	—	—	—	TC
-3		m. longicaudus	3400	♂	A	—	—	—	Tail-6.5cm T-18.
-1		P. man	4030	♂	A	—	—	—	

ecology consultants, i

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Greasewood - Sage Grid # A Project 83 Trap night 5

Date, time traps set 12/11/74 Date, time traps checked 12/12/74

Last toe clip # used on previous day 4030 Begin 4040 Checked by Ellinwood - Sang

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
E-1		P. man.	4040	♂	A	—	—	—	
E-6		P. man.	0013	♀	A	—	—	—	
-10		P. man	0302	♂	A				
-9		Mic. long.	3010	♀	A	—	—	—	Narcoso
-4		P. man.	2200	♂	A	—			
-7		Mic. long.	4050	♂	A	—	—	—	
-6		P. man.	2010	♂	A	—	—	—	
-2		P. man.	1004	♀	A	—	—	—	

Grid 15 - South P-J (5.1.2.15)

311.2.13 - 1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South P.J Grid #: B Trap Night: 1 Checked By: JC

Date, Time Traps Set: 8 10/19 Date, Time Traps Checked: 10 10/20

Li Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-2		E min	F.	A		0103			h.f < 30
M.13		E min	M	A		0104			h.f < 30
I-9		E ~~min~~ quad	M	A		0105			h.f < 30
H-7		E min	F	A		0201			h.f <30
H-8		E min	F	A		0202			h.f < 30
H.10		P man.	M	A		0203			tail < body
F-13		P man	F	A		0204			"
E.5		P man.	F	A		0205			"
E-6		P man	F	SA		0301			tail < body
E-8		E min	F.	A		0302			skull 33 h.f
		E min	F.	|		0303			h.f. < 30
D-11		E min	M	|		0304			h.f < 30
B.13		P man	M	|		0305			
B-12		E min	F	|		0401			h.f < 30
B-10		E min	F	|		0402			h.f < 30
B-8		E min	F	|		0403			h.f < 30
A-6		P man	M	|		0311*			
A-3		E min	M	↓		0404			h f < 30.

gnostic characters, parasites, etc.

I-6 [illegible] 2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South. P. I Grid #: 3 Trap Night: 1 Checked By: JB

Date, Time Traps Set: 8:00 10/19 Date, Time Traps Checked: 9:30 10/20

Li Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		P. Mam	F	A		00 01			
C-1		E. Min	M	A		00 02			hf. 28
D-1		E. Mam	F	A		00 03			hf. 26
A-1		P Mam	F	A		00 04			
-3		P truei	M	A		00 05			tail 8 bod 9
-6		P. Mam	F	A		00 10			
8		E. quad	F	A		00 20		Let loose at B-3	h-f = 33 Sk. brcn. 17 Sk. len. 40
9		E Min	M	A		00 30			Let loose at I-4, h-f 2
-10		P. Man	F	A		00 40			
H-11		E Min	F	A		00 50			h-f 2
-7		E Min	F	A		01 00			h-f 3
-3		E Mm	F	A		02 00			h-f 3
D-3		E Min	F	A		03 00			h-f 2
D-4		P Mam	M	J		04 00			
D-7		P. Mam	F	J		10 00			
C-6		E Min	F	A		20 00			DEAD
B-4		E Min	F	A		30 00			h-f 3
-11		E Min	M	A		40 00			h-f 2
-12		E Min.	M	A		00 11			h-f 3
A-3		E Min	M	A		00 12			h-f 2
A-12		E Min	F	A		00 13			h-f 2
A-11		E Min	F	A		00 14			DEAD

*diagnostic characters, parasites, etc.

ECI

5.1.2.15-3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South P.J. Grid #: B Trap Night: 2 Checked By: JB

Date, Time Traps Set: 10:00 10/20 Date, Time Traps Checked: 10:00 10/21
0015

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		E. min	♀	A		00 15			
B-2		E. min	♂	A		00 21			
-2		P. man	♂	J		00 22			
-2		Neo. ciner	♀	A		00 23			
-8		P. man		J		00 24			
-8		P. man	♂	J		00 25			
-13		E. min	♀	A		00 31			body tail ear
-13		E. min	♀	A		00 32			95 90 25
-12		P. man	♂	SA		00 33			
-6		P. truei	♂	A		00 05	R		Correct 10/20
		E. quad	♂	A		00 34			
-3		E. min	♀	A		02 00	R		
-9		E. min	♂	A		00 35			
-7		E. min	♀	A		02 02	R		
E-7		P. man	♀	A		10 00	R		
C-3		E. min	♀	A		03 00	R		
-6		E. min	♂	A		00 41			
C-8		E. min	♀	A		01 00	R		
C-10		E. min	♀	A		03 03	R		
C-12		E. min	♂	A		40 00	R		
A-13		E. min	♀	A		00 42			
A-12		E. min	♂	A		00 43			
-11		P. man	♂	A		00 44			
-10		E. min	♀	A		04 02	R		

agnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South P.J Grid #: 0 Trap Night: 2 Checked By: K

Date, Time Traps Set: 10 10/20" Date, Time Traps Checked: 10/21 10/21 0405

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		E min	♂	A		0405			
D-1		E min	♂	A		0062R			
K-1		P man	♀	J		0120			
M-3		P man	♀	A		0110			
M-6		P man	♀	A		0130			
M-12		P man	♂	J		0140			
M-13		E min	♂	A		0030R			
K-12		E min	♂	A		0150			
K-6		P. truei	♂	A		0210			T > hf.
K-4		P man	♀	A		0010R			
[illegible]-2		E min	♂	A		0220			
[illegible]-7		N. cinerea	♀	A		0250			
D-3		E min	♂	A		0230			
D-4		P man	♂	SA		0400R			
D-7		P man	♀	A		0205R			
D-13		E min	♀	A		0240			
3-12		E min	♀	A		0050R 0250R			clipped again change [illegible] note
B-11		P man	♀	A		0310			
B-8		E min	♀	A		0302R			
B-4		P man	♀	A		0301R			
B-8		P man	♂	A		0320			

ic characters, parasites, etc.

77-5-12-2-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: South P.J Grid #: B Trap Night: 3 Checked By: JB

ate, Time Traps Set: 6:00 10/21 Date, Time Traps Checked: 9:00 10/22

0045

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		E. min	♂	J		04 04	R		
-2		E. min	♂	A		00 21	R		
-2		P. man	♀	A		00 04	R		
-2		E. quad	♀	A		00 45			
-1		E. min	♂	A		00 51			
-3		E. quad	♀	A		00 52			
-6		P. truei	♀	A		00 53			
-8		E. quad	♀	A		00 54			
-11		P. man	♂	A		00 24	R		
-12		P. man	♂	A		03 05	R		04 00 is also clipped
		E. quad	♀	A		00 55			
-12		E. min. (?)	♂	A		01 04	R		
-6		P. truei	♂	A		00 05	R		
-4		P. man	♀	A		00 10	R		
-4		E. min	♀	A		02 01	R		
-5		P. man	♀	A		01 10	R		
-10		P. truei	♂	A		02 10	R		
-6		P. man	♂	A		01 01			
-7		E. min	♂	A		00 30	R		
-12		E. min	♀	A		02 02	R		
-11		E. min	♂	A		40 00	R		
~~-6~~		~~NEO. CINER.~~		A					escaped
		P. man.	♂	A		01 02			
		E. min	♂	A		01 03			
		P. man	♀	A		03 10	R		

nostic characters, parasites, etc.

ECI

5.11.2.75 16

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South P.J Grid #: B Trap Night: 3 Checked By: JB

Date, Time Traps Set: 12/21 Date, Time Traps Checked: 12/22

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-11		E. min	♀	A		00 42	R		
1-12		E. min	♀	A		03 01	R		From R.B #8
A-13		E. min	♀	A		01 04			

racters, parasites, etc.

5.1.2.12-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South P.J Grid #: B Trap Night: 3 Checked By: JC

Date, Time Traps Set: 9130 10/21 Date, Time Traps Checked: 9130 10/22 0330

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
?-1		Emin	♀	A		0330			
D-1		Pman	♂	A		0340			necro
H-1		Equad	♂	A		035[illegible]			hf 33 skull > 3
K-1		Emin	♀	A		[illegible]R			
[illegible]-1		Emin	♀	A		[illegible]10			
3	-	Equad	♂	A		0034R			
13	-	Equad	♀	A		0020R			
-13	-	Pman	♀	A		0204R			
I-12	--	Equad	♂	A		0105R			necro
I-4	-	Emin	♂	A		0035R			
[illegible]-4		Pman	♀	A		0420			
H-7		Emin	♀	A		0430			
?-8		Emin	♀	A		0100R			
[illegible]-5		Equad	♂	A		0440			h.f 34
F-4		Emin	♀	A		0300R			
F-3		Emin	♂	A		0062R			
D-7		Emin	♀	A		03[illegible]R			
3-12		Pman	♀	A		0450			
B-12		Emin	♂	A		0432R			
?-10		Emin	♀	A		040[illegible]R			

agnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South PJ Grid #: B Trap Night: 4 Checked By: JB

Date, Time Traps Set: 9:00 10/22 Date, Time Traps Checked: 9:00 1030 10/23

Lite Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		E. min	♀	A		02 0(3,4)	R		From R.B #8
B-1		E. min	♂	A		10 30			may have been marked 0130
K-1		E. min	♀	A		10 40			
M-1		E. quad	♀	A		00 45	R		
2		E. quad	♀	A		00 54	R		
3		N. cin.	♀	A		00 23	R		
-4		E. min	♂	A		00 51	R		
M-8		E. min	♀	A		02 50	R		
M-11		E. min	♂	A		01 04	R		~~wh~~ white spot on head
M-12		E. quad	♀	A		00 55	R		
13		E. quad	♀	A		00 54	R		
12		E. min	♂	A		01 50	R		Dead
-6		E. min	♀	A		02 02	R		
K-4		P. man	♀	A		01 10	R		
I-4		N. cin	♀	A		10 50			
I-5		E. quad	♂	A		00 34	R		
-7		E. min	♀	A		02 01	R		
-10		E. min	♀	A		03 03	R		
-6		E. min	♂	A		00 02	R		
-13		E. min	♂	A		00 12	R		
-8		E. min	♀	A		03 02	R		
-4		E. min	♂	A		04 04	R		
3		E. min	♀	A		03 01	R		
-		E. min	♂	A		00 41	R		
-8		P. man	♀	A		11 00			

*diagnostic characters, parasites, etc.

ECI

5.1.2.15-9

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South PJ Grid #: B Trap Night: 4 Checked By: JB

Date, Time Traps Set: 10/22 Date, Time Traps Checked: 10/23

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-10		E. min	♂	A		40 00	R		
-11		E. min	♀	A		00 42	R		
-12		E. min	♂	A		00 43	R		
-13		E. min	♀	A		02 40	R		

c characters, parasites, etc.

5.1.2.15-10

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: South PJ Grid #: B Trap Night: 4 Checked By: JC

Date, Time Traps Set: 8:30 10/22 Date, Time Traps Checked: 8:30 10/23

1001

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		Pman	♂	A		1001			
-2		Emin	♂	A		0021R			
-2		Emin	♂	A		1002			
-2		Emin	♀	A		0200R			
K-2		Equad	♀	A		1003			
-4		Ptruei	♂	A		0005R			
L-8		Equad	♀	A		1004			
J-13		Emin	♂	A		0011R			
-6		Emin	♂	A		0030R			
-5		Ncinerea	♀	A		0210R			(0250R)
		Emin	♀	A		0200R			
-3		Pman	♂	A		0022R			
-4		Emin	♀	A		0100R			
-7		Pman	♂	A		0203R			
-7		Pman	♀	A		0301R			
-3		Emin	♂	A		0230R			
-4		Emin	♀	A		0300R			
-5		Pman	♂	A		0400R			
-6		Emin	♂	A		0035R			necro
-11		Emin	♀	A		0316R			
-12		Emin	♂	A		0220R			
-13		Emin	♂	A		1005			
		Emin	♀	A		0073R			
-8		Emin	♀	A		1010			
-4		Emin	♂	A		1020			necro

gnostic characters, parasites, etc.

ECI

3.1.2.75-11

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Smith P S Grid #: B Trap Night: 4 Checked By: JC

ate, Time Traps Set: 10/22 Date, Time Traps Checked: 10/23

in et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
3-3		Emin	♀	A		0103A			

gnostic characters, parasites, etc.

2.1.2.16-14 (ECI)
3.1.2.12-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ation: Smith R1 Grid #: B Trap Night: 5 Checked By: JR

ate, Time Traps Set: 10:00 10/23 Date, Time Traps Checked: 10:00 10/24
1200

Li Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		E. min	♀	A		02 04	R		
-2		E. min	♀	A		00 15	R		
-2		P. man	♂	A		00 22	R		
-2		E. min	♂	A		00 51	R		
-10		E. quad	♀	A		00 55	R		
-13		E. quad	♀	A		00 54	R		
-11		P. man	♂	A		03 05	R		
-6		E. quad	♀	A		00 52	R		
-4		P. man	♀	A		01 10	R		
-4		P. man	♀	A		12 00			
5		P. truei	♂	A		00 05	R		
-10		P. man	♀	A		00 40	R		
-7		E. min	♂	A		04 04	R		
E-6		E min	♀	A		01 00	R		
-7		E. min	♂	A		13 00			
-12		E. min	♀	A		00 13	R		
-8		N. cin	♀	A		14 00			
A-10		E. min	♀	A		10 10	R		
-6		E. min	♂	A		20 01			
4-3		E. min	♂	A		04 05	R		

*diagnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name South PJ Grid # B Project 83 Trap night 1

Date, time traps set 1200 12/7 Date, time traps checked 11:30 12/8

toe clip # used on previous day 1012 Checked by JC, DM

t. .	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
1		P man	0004	♀	A				[illegible] u
9		P truei	0005	♂	↓				" " u
1		P. man	0400	♀	SA				u
3		tracks							

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name South P.T Grid # B Project 83 Trap night 2

Date, time traps set 12/8 1130 Date, time traps checked 12/9 10:20

Last toe clip # used on previous day 2001 Checked by DM JC

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
H1		P. maniculatus	0420	♀	ad				recapture
H2		" "	0004	♀	ad				"
H5		" "	0020	♂	ad				"
H-8		P. truei	0005	♂	ad				recapture

ecology consultants, in

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name South P.J Grid # B Project 83 Trap night 3

Date, time traps set 12/9 1030 Date, time traps checked 12/10

Last toe clip # used on previous day 1012 Checked by JC, DM

apt. oc.	Total Weight	Species.	Toe Clip No:	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
11-2		P man	0004	♀	A				recap
1-12		P man	0140	♂					″

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name South R5 Grid # B Project 83 Trap night 4

Date, time traps set 12/10 Date, time traps checked 12/11

L[illegible] toe clip # used on previous day 2001 Checked by JC, DM

pt.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
2		Pman	0004	♀	A				recap
5		Pman	2052	♂	A				
7		Pman	1000	♀					
12		Pman	0140	♂					necro
13		Pman	2003	♀					~~necro~~
1		Pman	0120	♀					recap.

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name South PJ Grid # B Project 83 Trap night 5

Date, time traps set 12/11 1130 Date, time traps checked 12/12 1130

Last toe clip # used on previous day 1012 Checked by JC DM

t.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
13		P. man	1013	♂	Sad				
10		P. man.	0310	♀	ad				
10		P. man	1014	♀	ad				
10		P. man	1015	♂	ad				
8		P. Truei	0210	♂	ad				
4		P man	0110	♀	SA				recap
3		P. Truei	0005	♂	ad				recap.
2		P. man	0004	♀	A				recap

Grid 16 - Hunting Club P-J (5.1.2.16)

1 of 2 5.7.2.76-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

cation: Hunt Club P/I Grid #: C Trap Night: 1 Checked By: Sanz, Kestrel

ate, Time Traps Set: 10-19-74 Date, Time Traps Checked: 10-20-74

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		E. minimus	♀	A		0001			hf 24 SBOT
-4		E. ~~minimus~~ quad	♀	A		0002			hf 28 SNBOT
-8		E. minimus	♂	A		0003			hf 26 SBOT
-10		P. maniculatus	♀	A		0004			hf 19 t-62
-11		E. ~~minimus~~ quad.	♀	A		0005			hf 28 SBOT
		E. ~~minimus~~ quad	♂	A		0010			hf 29 SBOT
		P. maniculatus	♀	A		0020			hf 17 +59
		Neotoma cinerea	♂	A		0030			bushy tail
-3		E. ~~minimus~~ quad	♀	A		0040			hf 26 SBOT
-2		P. maniculatus	♀	A		0050			hf 18 t-60
		P. maniculatus	♂	A		0100			hf 18 t-61
		P. maniculatus	♀	A		0200			hf 16 t-58
		P. maniculatus	♂?	A		0031			hf 17 t 67
		E. minimus	♂	A	swollen testis	0300			hf 26 SBOT
-10		P. maniculatus	♂	A		0400			hf 16 t-65
-13		P. maniculatus	♂	A		1000			hf 17 t-59
-12		P. maniculatus	♂	A		2000			hf 17 t-62
-11		P. maniculatus	♀	A		3000			hf 18 t-64
-8		E. ~~minimus~~ quad	♀	A		4000			hf 29 SBOT
-3		E. ~~minimus~~ quad	♀	A		0011			hf 29. SBOT
5		Spermophilus lateralis	♂?	A		0012			2 broad dorsal strips
		Peromyscus maniculatus	♀	A		0013			ears > hf t-81
		E. minimus	♀	A		0014			hf 26 SBOT
		P. maniculatus	♀	A		0015			hf 19 t-60
		E. minimus	♂	A		0021			hf 18 SBOT

ostic characters, parasites, etc. CONT

ECI

2of2 5.7.2.16-2

SMAL AMMAL LIVE TRAPPING FIELD DAT HEET

Location: Hunt Club PJ Grid #: — Trap Night: 1 Checked By: [illegible]

Date, Time Traps Set: 10/19/74 Date, Time Traps Checked: 10/20/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
9		E. minimus	♀	A		0022			SBOT HF28
11		E. ~~minimus~~ quad	♀	A		0023			SBOT HF27
11		P. maniculatus	♂	A		0024			t 60 hf 16
10		P. maniculatus	♂	A		0025			t 62 hf 17
1		P. maniculatus?	♂	A		0032			t 69 hf 18
		P. maniculatus	♂	A		0033			t 62 hf 17
		P. maniculatus	♂	A		0034			t 69 body hf 18 ear 1
4		P. truei	♂	A		0035			ear 22 hf 20 grey pelage
6		E. quad	♂	A		0041			Both ears chewed SBOT hf 29
11		P. maniculatus	♀	A		0042			hf 17 t-67
		P. maniculatus	♂	A		0043			hf 19 t-68 e-17
6		E. minimus	♀	A		0044			SBOT hf 27
1		P. maniculatus	♂	A		0045			t 66 hf 18 ear 1
1		P. maniculatus	♂	A		0051			t 67 body 74 hf 17 e 15 buffy

*diagnostic characters, parasites, etc.

5.1.2.16-5

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Hunting Club P/J Grid #: E2 Trap Night: 2 Checked By: Kestrel

Date, Time Traps Set: 10/20/74 Date, Time Traps Checked: 10/21/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		E. minimus	♂	A	swollen testis	0052			hf 31
4		E. quadrivittatus	♂	A		0053			
-10		E. minimus	♀	A		0054			
-11		E. quadrivittatus	♀	A		0005	r		hf 31
-13		P. maniculatus	♂	A		0055			
-13		P. maniculatus	♂	A		1000	r		
-11		E. quadrivittatus	♂	A		0010	r		hf 32
-11		P. maniculatus	♂	A		0101			
-4		E. minimus	♂	A		0300	r		
4		P. maniculatus	♀	A		0050	r		
5		P. maniculatus	♂	A		0000	r		
-2		P. maniculatus	♀	A		3000	r		
1		P. maniculatus	♂	A		0022	r		
-3		E. quadrivittatus	♀	A		0102			hf 31
4		P. maniculatus	♂	A		0021	r		
~~15~~		~~skipped in [illegible]~~		~~A~~					~~escaped through bac captured and [illegible] and [illegible]~~ yest.
9		E. quadrivittatus	♀	A		0011	r		hf 31
9		P. truei	♀	A		0013	r		24+80 h 75 hf 21
5		E. minimus	♀	A		0022	r		
13		E. minimus	♀	A		0044	r		
12		E. minimus	♂	A		0103			
52		E. minimus	♂	A		0104			
		P. maniculatus	?	A		0105			
7		P. maniculatus	♂	A		0205			
41		E. minimus	♂	A		0201			X

* diagnostic characters, parasites, etc.

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Hunt Club P/J Grid #: AC Trap Night: 2 Checked By: Keshd

Date, Time Traps Set: 10/20/74 Date, Time Traps Checked: 10/21/74

0202

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
[illegible]-3		E. minimus	♂	A		0200			
K-6		P. truei	♂	A		0035	r		
K10		P. maniculatus	♂	A		0024	✓		
[illegible]13		P. maniculatus	♀	A		0203			
M 11		P. maniculatus	♂	A		0043	r		
2		E quadrivittatus	♂	A		0041	r		hf 31
4		E minimus	♂			0120	?		
L1		P. maniculatus	♂	A		0015	r		
M3		P. maniculatus	♀			0204			
M2		P. maniculatus	♀	A		0301			
1		P. maniculatus	♀	A		0033	r		

*diagnostic characters, parasites, etc.

1 of 2

5.7.2.16-5

SMAL AMMAL LIVE TRAPPING FIELD DAT HEET

Location: Hunt Club P/J Grid #: C Trap Night: 3 Checked By: Reetz

Date, Time Traps Set: 10/21/74 Date, Time Traps Checked: 10/22/74

Sick animal E. minimus # (0120) around L4

Lin Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
1-2		E minimus	♀	A		03 03			
1-4		E quadrivittatus	♂	A		00 53	r		
-10		P. maniculatus	♀	A		00 20	r		
-11		E. quadrivittatus	♀	A		00 05	r		
1-13		E minimus	♂	A		03 04			
13		P. maniculatus	♀	A		30 00	r		
1		E quadrivittatus	♀	A		00 23	r		
0		E. minimus	♀	A		00 54	r		
-8		P. maniculatus	♂	A		01 01	r		
-6		E quadrivittatus	♂	A		03 05			
3		E quadrivittatus	♀	A		00 40	r		
-2		P. maniculatus	♀	A		04 01			
-2		P. maniculatus	♂	A		04 02			
-2		E minimus	♀	A		04 03			
C-6		E quadrivittatus	♀	A		00 11	r		
-12		P maniculatus	♂	A		10 00	r		
D-10		E minimus	♀	A		04 04			
D-6		P. maniculatus	♀	A		00 50	r		
D-1		E minimus	♀	A		00 22	r		
E-1		P. maniculatus	♀	A		04 05			
E-4		E. minimus	♀	A		03 00	r		
E-5		E quadrivittatus	♀	A		00 02	r		
		P. maniculatus	♂	A		00 31	r		
E-8		P. maniculatus	♀	A		01 10			
E-11		E. minimus	♀	A		01 20	r		

diagnostic characters, parasites, etc.

202 SMAL[illegible]AMMAL LIVE TRAPPING FIELD DATA [illegible]EET 5.1.2.16=6

Location: Hunt Club P/J Grid #: C Trap Night: 3 Checked By: Kestrel

Date, Time Traps Set: 10/21/74 Date, Time Traps Checked: 10/22/74

E.minimus #10120 around L4

Li Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	0150 Animal Weight	Additional Notes*
-7		P.maniculatus	♂	A		0130			
-10		P.truei	♀	A		0013	r		
1-11		E.quadrivittatus	♀	A		4000	r		
1-3		E.minimus	♀	A		0140			
-2		E.minimus	♀	A		0044	r		
1		P.maniculatus	♀	A		0015	r		
1		E.minimus	♂	A		0050	r		
-4		E.minimus	♂	A		0201	r		—
-7		P.maniculatus	♀	A		0202	—		—
-5		P.maniculatus	♀	A		0004	r		
1		E.minimus	♂	A		0203	—		—
		E.minimus	♂	A		0204	—		—
4		E.minimus	♂	A		0120	r		
-6		P.truei	♂	A		0035	r		
K-10		P.maniculatus	♀	A		0203	r		
M-12		P.maniculatus	♀	A		0150			
M-11		P.maniculatus	♂	A		0043	r		
L-10		P.maniculatus	♂	A		0024	r		
M-9		E.quadrivittatus	♂	A		0041	r		
M-4		E.minimus	♂	A		0210			
L-4		P.maniculatus	♀	A		0220			
L-1		E.minimus	♂	A		0230			

*diagnostic characters, parasites, etc.

1013 SMALL MMAL LIVE TRAPPING FIELD DATA ET 5.1.2.16=7

ocation: Hunt Club Grid #: -- Trap Night: 4 Checked By: Kesteso

ate, Time Traps Set: 10/21/74 0240 Date, Time Traps Checked: 10/23/74

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		E. minimus	♂? ♀	A		0003	r		
-10		E minimus	♀	A		0054	r		
-11		P. maniculatus	♂	A		0240			
-13		P. maniculatus	♂	A		0055	r		
-13		P. maniculatus	♂	A		0250			
-10		E. minimus	♂	A		0300	r		
3-8		E. minimus	♀	A		0310			
13-4		E. quadrivittatus	♀	A		0011	r		
-3		E. quadrivittatus	[illegible]	A		0040	r		
2		E. minimus	[illegible]			0300	r		
11		E. quadrivittatus	♀	A		0023	r		
2		P. maniculatus	♀	A		3000	r		
-11		P. maniculatus	♂	A		0400	r		
-9		E. quadrivittatus	♂	A		0220			
-1		E. minimus	♂	A		0330			
-4		P. maniculatus	♀	A		0050	r		
-5		P. maniculatus	♂	A		0031	r		
8		P. maniculatus	♀	A		0110	r		
-9		E. quadrivittatus	♂	A		0041	r		
-11		E quadrivittatus	♀	A		4000	r		
12		P. maniculatus	♂	A		0340			
F-9		P. maniculatus	♀	A		0004	r		
7		E. minimus	♀	A		0014	r		
-6		P. maniculatus	♂			2000	r		
7-4		E. quadrivittatus	♀	A		0002	r		

iagnostic characters, parasites, etc.

ECI

2of3 SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET L-B 5.1.2.16-8

Location: [illegible] Grid #: ______ Trap Night: 4 Checked By: [illegible]

Date, Time Traps Set: ______ Date, Time Traps Checked: ______

0350

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-6		S. lateralis	♂	A		0012	r		
H-3		E. minimus	♀	A		0411			check for clip
H-2		E. minimus	♂	A		0350			
H-1		P. maniculatus	♂	A		0032	r		
I-2		E. minimus	♂	A		0104	r		trapbox
I-4		E. minimus	♂	A		0021	r		
-5		P. maniculatus	♂	A		0414			
I-7		P. truei	♀	A		0013	r		
I-9		P. maniculatus	♂	A		0420			
I-10		P. maniculatus	♀	A		0430			
[illegible]		P. maniculatus	♂	A		0202	r		
J-5		E. minimus	♀	A		0022	r		
J-1		E. minimus	♂	A		0102	r		
K-3		P. maniculatus	♀	A		0220	r		
K-11		P. maniculatus	♂	A		0124	r		
L-3		P. maniculatus	♂	A		0051	r		
L-12		P. maniculatus	♀	A		0203	r		
M1		P. maniculatus	♂	A		0043	r		
10		P. maniculatus	♂	A		0005	r		
4		P. maniculatus	♀	A		0440			
18		P. truei	♀	A		0450			
16		E. minimus	♀	A		0044	✓		
[illegible]		P. maniculatus	♀	A		[illegible]	r		
M-3		P. maniculatus	♀	A		0034	r		
M-3		P. maniculatus	♀	A		0301	r		Killed & eaten by 0034

*diagnostic characters, parasites, etc.

3 of 3

3.1.2.16-4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Hunt Club Grid #: ____ Trap Night: 4 Checked By: ____

Date, Time Traps Set: ____ Date, Time Traps Checked: ____

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-3		P. maniculatus	♂	A		1001			
1-2		E. minimus	♂	A		0203	r		trapbox at L-2
-1		E. minimus	♂	A		0230	r		

characters, parasites, etc.

ECI

5.1.2.16-

1 of 2 SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Hunt Club Grid #: C Trap Night: 5 Checked By: Keeler

Date, Time Traps Set: 10/23/74 Date, Time Traps Checked: 10/24/74

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
M8		P. maniculatus	A	♂		1002			
M12		E. quadrivittatus	A	♀		1003			
M13		P. maniculatus	A	♂		0120	R		
L10		P. maniculatus	A	♀		0150	R		
L4		P. maniculatus	A	♀		0220	R		
L-3		P. maniculatus	A	♂		0145	R		
K-3		E. minimus	A	♂		0201	R		
K-2		E. minimus	A	♂		0120	R		
K-1		P. maniculatus	A	♀		0033	R		
L-1		E. minimus	A	♂		0230	R		
[illegible]		P. maniculatus	A	♂		1005			
K-6		P. maniculatus	A	♀		0410	R		
K-8		P. maniculatus	A	♂		0025	R		
K-13		P. truei	A	♀		0113	R		
I-9		E. quadrivittatus	A	♀		1003			ht 16 tl 120
J9		M. montanus	A	♂		1004			
J-8		E. minimus	A	♀		0022	R		?
J2		P. maniculatus	A	♀		1010			
J-4		E. minimus	A	♀		0044	R		
J-3		P. maniculatus	J	♀		1022			
J-2		P. maniculatus	A	♂		0032	R		
H-3		P. maniculatus	A	♂		0410	R		
[illegible]		P. maniculatus	A	♂		0045	R		
H-8		E. minimus	A	♂		0250	R		
H-10		E. quadrivittatus	A	♂		0041	R		

*diagnostic characters, parasites, etc.

ECI

20½ SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.16-11

Location: [illegible] Club Grid #: C Trap Night: 3 Checked By: Kestrel

Date, Time Traps Set: 10/23/74 Date, Time Traps Checked: 10/24/74 1030

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-13		P. maniculatus	♂	A		0340	R		
-11		F. quadrivittatus	♀	A		4000	R		
-4		E. quadrivittatus	♀	A		0002	R		
-2		E. minimus	♀	A		1030			
D-1		E. minimus	♂	A		1330	R		
D-2		E. minimus	♂	A		0300	R		necro
E4		E. minimos	♀	A		0141	R		
E6		P. maniculatus	♀	A		1040			
E8		P. maniculatus	♂	A		0031	R		
E9		P. maniculatus	♀	A		0020	R		
1[illegible]		P. maniculatos	♀	A		1050			
D11		E. minimos	♀	A		0120	R		
C-8		E. minimos	♀	A		0310	R		
C-4		E. quadrivittatus	♀	A		0011	R		
C-2		P. maniculatus	♀	A		0015	R		
C-1		P. maniculatus	♀	A		4102	R		
B-1		E. minimus	♂	A		2010			
B-3		F. quadrivittatus	♀	A		0102	R		
B-12		E. quadrivittatus	♀	A		2020			
B-13		P. maniculatus	♂	A		1000	R		
A-13		E. minimus	♀	A		0130	-		
A-10		E. minimus	♀	A		0154	R		
[illegible]		E. minimus	♂	A		0003	escaped		

diagnostic characters, parasites, etc.

5.1.2.16-12

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Hunting Club P-1 Grid # C Project 83 Trap night 1

Date, time traps set Dec 7. 1974 Date, time traps checked Dec 8. 1974

L toe clip # used on previous day 1050 Checked by Sanz, Ellinwood

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
4-8		Peromyscus truii	1035	♂	A	—	—	—	
	F-1	" "	"						
	F-2	Tracks – No Capture							

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Hunt Club P.J. Grid # C Project 83 Trap night 2

Date, time traps set 12/8/74 Date, time traps checked 12/9/74

Last toe clip # used on previous day 1050 Checked by Sanz ; Ellinwood

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		No Captures							

2.1.2.16-74 ECI
ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Hunt Club - P-J Grid # C Project 83 Trap night 3

Date, time traps set 12/9/74 Date, time traps checked 12/10/74

Last toe clip # used on previous day 1030 Checked by Ellinwood - Samy
Start c 1100

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes

NO CAPTURES

9.1.2.16-15 ECI
ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Hunt Club P.J. Grid # C Project 83 Trap night 4

Date, time traps set 12/10/74 Date, time traps checked 12/11/74

Last toe clip # used on previous day 1030 Checked by Sanz, Ellinwood
begin 1100

apt. oc.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		No Captures							

2.1.2.16-16

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Hunt Club P-J Grid # C Project 83 Trap night 5

Date, time traps set 12/10/74 Date, time traps checked 12/12/74

Last toe clip # used on previous day 1080 Checked by Ellinwood - Sang

Begin 1100

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
H-10		P. truei	1035	♂	A				
J-4		Pinion-Jay	—	—	—				
E-1		P. man.	0033	♀	A				

Grid 17 - Sage (5.1.2.17)

S.1.2.11-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 1 Checked By: JB

Date, Time Traps Set: 4:00 10/19 Date, Time Traps Checked: 4:00 10/20

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		P. Man	♂	J		00 01			
-4		P. Man	♀	A		00 02			
-11		E. Min	♀	A		00 03			30
-13		P. Man	♂	A		00 04			
-12		E. Min	♂	A		00 05			29
-2		E Min.	♀	A		00 10			30
11		P. Man	♂	J		00 20			
7		E. Min	♂	A		00 30			
12		P. Man	♀	A		00 40			
-11		P. Man	♂	A		00 50			
[illegible]		E Min	♀	A		01 00			30
-6		P. Man	♂	A		02 00			
-3		Shrew				03 00			DEAD
-7		P. Man	♀	A		04 00			

iagnostic characters, parasites, etc.

5.1.2.17-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Sage Grid #: D Trap Night: 1 Checked By: JC

ate, Time Traps Set: 3:30 10/19 Date, Time Traps Checked: 4:00 10/20

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
1-1		P man	♂	A		0103			tail < bod.
3		P man	♂	↓		0104			tail < bod
11		P man	♂	↓		0105			"
2		E min	♀	↓		0201			hf < 30
13		P man	♀	↓		0202			t < b.
-2		P man	♀	↓		0(1 3 4 5)05			missing left hind foot
6		P man	♂	SA		0703			
8		P man	♀			0204			
9		E min	♀			0205			hf < 30
13		N. cinerea	♀			0301			
1		P man	♀			0302			
		P man	♀			0303	NECRO		in same trap with Sorex and had its head eaten Necro
		P man	♀			0304			
		E min	[illegible]			x305			hf < 30

*Diagnostic characters, parasites, etc.

5.1.2.17 - 3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 2 Checked By: JB

Date, Time Traps Set: 4:30 4/20 Date, Time Traps Checked: 4:30 4/21
1000

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	~~Trap Weight~~	Animal Weight	Additional Notes*
M-4		E. min	♂			10 00	—		
M-11		E. min	♂			20 00			
M-13		P. man	♀			02 [illegible]	R		
-12		vole L. curtatus	♂			30 00			DEAD
-11		E. min	♂			40 00			
K-8		E. min	♀			00 11			
-2		P. man	♀			00 12			
6		E. min	♂			00 13			
-4		E. min	♀			00 14			
-8		E. min	♀			00 15			
		P. man	♂			00 21			
-3		P. man	♀			00 22			
-4		P. man	♂			00 23			
-6		E. min	♂			00 24			
-8		E. min	♂			00 30	R		
-10		E. min	♂			00 31			

*diagnostic characters, parasites, etc.

ECI

S.1.2.17-4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 2 Checked By: JC

Date, Time Traps Set: 4 10/20 Date, Time Traps Checked: 4 30 10/21

0401

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
I-1		P man	♀	A		0401			
L-2		P man	♂	A		0001R			no hair on tail
4		P man	♀			0002R			
3		P man	♂			0402			
I-13		E min	♂			0403			
1-10		E min	♂			0404			
		E min	♂			0405			
		E min	♀			0100R			
10		E min	♂			0005R			
-11		P man	♂			0020R			
H-[illegible]		E min	♂			0110			
H-13		E min	♂			0120			
F-12		P man	♀			0400R			
F-10		E min	♂			0130			
D-4		P man	♀			0140			
D-8		P man	♀			0202R			
D-9		E min	♀			020[illegible]R			
D-17		P man	♀			[illegible]R			
B-13		N cinerea	♀			0301R			
B-12		P man	♂			0050R			
B-11		P man	♀			0302R			
B-10		E min	♂			0150			
B[illegible]		P man	♀			0304R			
B-7		E min	♀			0210			

*diagnostic characters, parasites, etc.

ECI
ECI

5.1.2.17-5

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 3 Checked By: JB

Date, Time Traps Set: 4 10/21 Date, Time Traps Checked: 4 10/22 0532

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
L-1		P. man	♀	A		0401	R		
L-2		E. min	♀	A		0010	R		
3		E. min	♂	A		0032			
4		E. min	♂	A		0033			
6		E. min	♀	A		0011	R		
L-10		P. man	♀	A		0034			
3		E. min	♂	A		0035			
13		E. min	♂	A		0005	R		
12		E. min	♀	A		0041			
J-8		P. man	♀	A		0042			
		P. man	♂	A		0043			
H-4		E. min	♀	A		0014	R		
H-9		E. min	♂	A		0130	R		
H-10		P. man	♂	A		0044			
H-11		E. min	♀	A		0045			
H-12		E. min	♂			0110	R		
13		P. man	♀			0051			
13		E. min	♀	A		0052			
12		E. min	♂			0120	R		
10		E. min	♀			0108	R		
D-2		P. man	♂			0021	R		
D-4		E. min	♂			0053			
D-1[illegible]		E. min	♀			0205	R		
D-12		P. man	♀			0040	R		
-12		E. min	♀			0054			

*diagnostic characters, parasites, etc.

5.I.2.77-6

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 3 Checked By: JB

Date, Time Traps Set: 4 10/21 Date, Time Traps Checked: 4 10/22

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-10		P. man	♀	A		02 04	R		
B-6		P. man	♀	A		03 04	R		

---

*diagnostic characters, parasites, etc.

S.1.2.17-7 3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 3 Checked By: JC

Date, Time Traps Set: 4 10/21 Date, Time Traps Checked: 4 10/22 0220

Line[1] Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
M-3		Pman	♂	A		0220			
M-4		Emin	♀			0230			
M-8		Pman	♂			0402R			
M-13		Emin	♀			0240			
K-11		Emin	♀			0250			
K-8		Emin	♂			1000R			
K-2		Emin	♂			0310			
I-6		Pman	♀			0320			
I-10		Emin	♂			4000R			
-8		Pman	♂			0020R			
		Emin	♂			0330			
		Emin	♂			0030R			
12		Pman	♀	J		0140R			
-11		Pman	♂			0050R			
C-3		Pman	♂			0340			
A-2		Emin	♂			0350			
A-3		Pman	♂			0003R			
A-4		Emin	♀			0410			
A-6		Emin	♀			0305R			
A-10		Pman	♀			0420			Necro
A-13		Emin	♀			0430			
B-8		Emin	♂			0031R			
B-		Emin	♂			0440			

*diagnostic characters, parasites, etc.

ECI

5.1.2.17-8

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 4 Checked By: K

Date, Time Traps Set: 4 10/22 Date, Time Traps Checked: 4 10/23 0450 stop 1020

Li Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
L-1		Pman	♀	A		0401R			
M-3		Pman	♀			0302R			
M-4		Pman	♀	~~A~~		0230R			not included in indiv. record
M-8		Pman	♂			0105R			
M-10		Emin	♀			0003R			
M-13		Pman	♂			0450			
13		Emin	♂			4000R			
11		Emin	♂			1001			
K-6		Emin	♂			2005R			
T-6		Pman	♀			1002			
[illegible]		Pman	♀	J		0012R			
I-10		Emin	♀			0015R			
E-4		Emin	♀			0014R			
E-5		Pman	♂			1003			
E-6		Emin	♂			0053R			
E-7		Emin	♀			0015R			
E-8		Emin	♀			0205R			
C-13		Emin	♂			0031R			
C-12		P. man	♀			0302R			
C-11		Emin	♂			1005R			misread mark marked 1005 = 0005
C-6		Emin	♂			0200			~~[illegible]~~ Rat. mark 1st capture
C-4		Emin	♂			~~1050R~~			0150 R (on indi recor
3		Pman	♂			0340R			
A-[illegible]		Pman	♂			1004			
A-[illegible]		Pman	♀			0304R			

*diagnostic characters, parasites, etc.

5.1.2.17-9

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 4 Checked By: JB

Date, Time Traps Set: 10/22 Date, Time Traps Checked: 4 10/23

0055

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-2		P. man	♀			04 00	R		
D-2		P. man	♂			00 21	R		
I-2		P. man	♀			00 05	R		0X 00 foot is missing
L-2		P. man	♂			00 01	R		
-3		P. man	♂			01 04	R		
[illegible]		E. min	♂			10 00	R		
[illegible]		P. man	♀			00 34	R		
3		P. man	♂			04 02	R		?
8		P. man	♂			04 02	R		
-7		E. min	♀			00 11	R		
K		P. man	♀			03 20	R		
H-11		E. min	♀			01 01	R		
H-12		P. man	♂			00 20	R		
H-13		P. man	♀			00 51	R		
F-13		E. min	♀			00 41	R		
F-12		E. min	♂			01 20	R		
D-6		P. man	♀			01 40	R		
D-10		E. min	♂			00 55			
D-12		P. man	♀			00 40	R		
B-13		P. man	♀			01 01			DEAD
B-12		P. man	♂			00 50	R		
B-8		E. min	♂			00 20	R		
B		E. min	♀			03 05	R		
A-6		P. man	♂			00 23	R		DEAD

*diagnostic characters, parasites, etc.

5.1.2.11-

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Cape Grid #: D Trap Night: 5 Checked By: JB

Date, Time Traps Set: 5·00 10/23 Date, Time Traps Checked: 5·00 10/24 0102

Live Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-1		E. min	♀			01 02			
C-1		P. man	♂			00 21	R		
L-1		E. min	♀			10 30			
M-4		E. min	♂			03 10	R		
M-8		E. min	♀			02 30	R		
-10		P. man	♂			01 05	R		
13		P. man	♀			10 40			may be 1004
-6		E. min	♂			10 00	R		
I-8		E. min	♂			01 30	R		
I-10		E. min	♂			01 10	R		DEAD
[illegible]		E. min	♀			02 05	R		DEAD
E-4		E. min	♀			10 50			
E-7		E. min	♂			02 00	R		nat. mark
E-9		E. min	♂			11 00			
C-6		P. man	♀			12 00			
-3		E. min	♀			12 00			mistak
6		E. min	♀			04 10	R		
8		E. min	♂			00 53	R		
-13		P. man	♂			10 04	R		

*diagnostic characters, parasites, etc.

ECI

5.1.2.17-11

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 5 Checked By: JC

Date, Time Traps Set: 5:00 10/23 Date, Time Traps Checked: 5:00 10/24

1010 stop 1020

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-2		Pman	♂	A		1010			
L-2		Pman	♀			1020			
L-3		Pman	♂			0061R			
L-4		Slaterale	♂			4100			
-11		Pman	♀			0034R			
2		Emin	♂			0035R			
		Emin	♂			~~1005R~~ 1001R			
11		Emin	♂			4000R			
-10		Pman	♂			0020R			
-9		Emin	♂			2000R			
		Pman	♀			0.0- 4 3 R			
-7		Emin	♀			0011R			
H-3		Pman	♀			0320R			
H-5		Slaterale	♂			4200			
H-7		Pman	♀			0140R			
1-8		Emin	♀			2001R			
1		Emin	♀			0045R			
2		Pman	♀			4300			
		Vole L. curtatus	♀			4400			Kept
-13		Emin	♀			0041R			
F-11		Vole Phen L. curtatus	♀			1011			Kept
D-3		Pman	♀			0304R			
D		Pman	♂			0030R			
D-13		Emin	♂			0120R			
B-13		Emin	♂			1005R			

*diagnostic characters, parasites, etc.

ECI

5.1.2.17-12

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Sage Grid #: D Trap Night: 5 Checked By: JC

Date, Time Traps Set: 5:00 10/23 Date, Time Traps Checked: 5:08 10/24

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-17		Emin	♀	A		5015R			
B-11		Eman	♀			032R			
B-10		Emin	♂			0031R			
B-8		Emin	♀			043R			
B-6		Emin	♀			1012			

c characters, parasites, etc.

ECI

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Sage Grid # D Project 83 Trap night 1

Date, time traps set 12/7 Date, time traps checked 12/8

L[illegible]t toe clip # used on previous day 1012 Checked by JC / DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
G-4		Tracks							around trap
F12		Lagurus curtatus	1013	oo	ad				
H-8		Tracks							
H-10		"							

oology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Sage Grid # D Project 83 Trap night 2

Date, time traps set 12/8 Date, time traps checked 12/9

Last toe clip # used on previous day 1013 Checked by JC / DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		no captures.							

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Sage Grid # D Project 83 Trap night 3

Date, time traps set 12/9 Date, time traps checked 12/10

L[illegible] toe clip # used on previous day 1013 Checked by JC / DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		no captures							

3.1.2.11-76

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Sage Grid # D Project 83 Trap night 4

Date, time traps set 12/10 3:30 Date, time traps checked 12/11 4:00

Last toe clip # used on previous day 1013 Checked by JC / DM

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		no captures							

ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Sage Grid # D Project 83 Trap night 5

Date, time traps set 12/11 400 Date, time traps checked 12/12 400

La[illegible] toe clip # used on previous day 1200 Checked by JC /DM

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-10		Lag. curtatus	1300	5					

Grid 18 - Mountain Brush (5.1.2.18)

5.1.2.18-1

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Mtn. Brush Grid #: E Trap Night: I Checked By: WTT

Date, Time Traps Set: (1000) 10/19/74 Date, Time Traps Checked: 10/20/74 (1015)

Lin t) Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		Eutamias minimus	escaped	A	—	0001			n.f. 28mm 5 ds extend to [illegible]
A-4		E. minimus	♀	A		0002			5 ds. extend to tail
B-4		E. "	♀	A		0003			n.f. 26 m 5 ds extend to tail
2		E. "	♂	A		0004			" " " "
3		E. "	♂	A		0005			" " " "
		E. "	♀	A		0010			" " " "
-7		E. "	♀	A		0020			" " " "
D-6		E. "	♀	A		0030			" " " "
F-2		E. "	♀	A		0040			" " " "
-5		E. "	♂	A		0050			" " " "
		E. "	♂	A		0100			" " " "
2		E. "	♂	A		0200			" " " "
1-12		P. maniculatus	♂	A		0300			bicolored tail
H-5		E. minimus	♀	A		0400			5 ds extend to tail
H-2		P. maniculatus	♂	A		1000			bicolored tail
H-1		P. "	♂	A		2000			" "
J1		P. "	♀	A		3000			" "
J-6		P. "	♂	A		4000			" "
J-12		E. minimus	♂	A		0011			5 ds extend to tail
K-3		P. maniculatus	♂	A		0012			bicolored tail
K-1		E. minimus	♀	A		0013			5 ds extend to tail
M-4		P. maniculatus	♂	J		0014			bicolored tail
1		E. minimus	♀	A		0015			5 ds extend to tail
I-4		P. maniculatus	♂	A		0021			bicolored tail
I-7		E. minimus	♂	A		0022			5 ds extend to tail

*diagnostic characters, parasites, etc. (CONT.)

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET CONT 9.1.2.18-2

Location: Mtn Brush Grid #: E Trap Night: Checked By:

Date, Time Traps Set: Date, Time Traps Checked:

Bait Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
(CONT)									
G-10		E. minimus	♂	A			0023		5 b. [illegible] + tail
E-10		E. "	♂	A			2024		" " "

*diagnostic characters, parasites, etc.

ECI

5.1.2.18-3

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Wht. Brush Grid #: E Trap Night: 2 Checked By: WTT

Date, Time Traps Set: 10/20/74 (1015) Date, Time Traps Checked: 10/21/74 (1045)

0025

r Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
1-12	-	E. minimus ✓	♀	A		0030 ✓			5 d.s. extend to tail
3-6		E. " ✓	♂	A		0004 ✓			" " "
B-3		E. " ✓	♂	A		0050 ✓			" "
B-2		P. maniculatus ✓	♀	A		0025			bicolored tail
C-1		P. " ✓	♂	A		2000 ✓			" "
C-8		E. minimus ✓	♂	A		0005 ✓			5 d.s. extend to tail
-12		E. " ✓	♂	A		0031			" " "
-13		E. " ✓	♀	A		0032			" " "
-13		E. " ✓	♂	A		0033			" " "
-7		E. " ✓	♀	A		0020 ✓			" " "
		E. " ✓	♀	A		0034			" " "
		P. maniculatus ✓	♂	A		0035			bicolored tail
-9		P. " ✓	♂	A		0041			" "
-11		E. minimus ✓	♂	A		0100 ✓			5 d.s. extend to tail
-13		E. " ✓	♀	A		0042			" " " "
-12		P. maniculatus ✓	♂	A		0300 ✓			bicolored tail
1-2		E. minimus ✓	♂	A		0043			5 d.s. extend to base of t
5-4		P. maniculatus ✓	♂	A		4000 ✓			bicolored tail
-6		E. minimus ✓	♀	A		0044			5 d.s. extend to base of
13		E. " ✓	♂	A		0200 ✓			" " " " "
-6		P. maniculatus ✓	♂	A		0045			bicolored tail
-1		E. minimus ✓	♀	A		0051			5 d.s. extend to base of t
		E. " ✓	♀	A		0052			" " "
		E. "	♂	A		0022 ✓			" " "
		E. " ✓	♂	A		0053			"

c characters, parasites, etc.

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: MHW Brush Grid #: E Trap Night: 2 Checked By:

ate, Time Traps Set: Date, Time Traps Checked:

0054

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
	(CONT)								
H-11		E. minimus ✓	♀	A		0054			5ds extend to tail
1-8		E. " ✓	♂	A		0055			" " "
1-1		E. " ✓	♀	A		0010 ✓			" " "
4		P. maniculatus ✓	♀	A		0101			bicolored tail
6		E. minimus ✓	♀	A		0400 ✓			5ds extend to tail
		E. " ✓	♂	A		0102			" " "

*diagnostic characters, parasites, etc.

ECI

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Mtn Brush Grid #: E Trap Night: 3 Checked By: WTT

ate, Time Traps Set: 10/21/74 (1045) Date, Time Traps Checked: (1023) 10/22/74

0103

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-4		P. maniculatus ✓	♂	A		0021	✓		bicolored tail
M-2		E. minimus ✓	♀	A		0010	✓		s.d.s. extend to tail
M-8		E. " ✓	♂	A		0055	✓		"
M-11		E. "	♀	A		0040	✓		" "
L-12		P. maniculatus ✓	♂	A		0103			bicolored tail
-8		P. " ✓	♂	A		001-	✓		" "
-2		P. " ✓	♂	A		0012	✓		" "
K-2		E. minimus ✓	♀	A		0013	✓		s.d.s. extend to tail
K-6		P. maniculatus ✓	♀	A		0101	✓		bicolored tail
-12		E. minimus ✓	♂	A		0200	✓		s.d.s. extend to tail
		E. " ✓	♀	A		0400	✓		s " " "
6		E. " ✓	♂	A		0022	✓		s " "
-5		E. " ✓	♀	A		0040	✓		s " "
J-4		P. maniculatus ✓	♂	A		4000	✓		s " "
J-3		P. "	♀	A		0104			bicolored tail
2		P. " ✓	♂	A		1000	✓		" "
12		P. " ✓	♂	A		0300	✓		" "
13		E. minimus ✓	♀	A		0032	✓		s.d.s. extend to tail
-9		P. maniculatus ✓	♂	A		0041	✓		bicolored tail
D-7		E. minimus ✓	♀	A		0020	✓ DEAD		s.d. extend to tail
D-12		E. " ✓	♂	A		0023	✓		s " " "
D-13		E. " ✓	♀	A		0042	✓		s " " "
		E. " ✓	♀	A		0010	✓		s " "
C-12		E. " ✓	♀	A		0030	✓		s " " "
C-6		E. " ✓	♂	A		0050	✓		s " " "

*diagnostic characters, parasites, etc.

ECI

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 3.1.2.18-6

Location: MHN Birch Grid #: E Trap Night: 3 Checked By: --

Date, Time Traps Set: 0105 Date, Time Traps Checked:

ne Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
		Cont							
C-3		P. maniculatus ✓	♂	A		2000 ✓			bi. colored tail
B-2		E. minimus	♂	A		0105			5 dks extend to tail
B-3		E. " ✓	♂	A		0004 ✓			" " "
B-6		E. " ✓	♀	A		0002 ✓			" " "
-8		E. " ✓	♂	A		0001 ✓			" " "
1		E. " ✓	♂	A		0005 ✓			" " "
-13		E. "	♀	A		0201			" " "
A-12		E. " ✓	♂	A		0033 ✓			" " "
A-3		P. maniculatus	♂	A		0035 ✓			bicolored tail
A-2		E. minimus	see ind. sheet	A		0003 ✓			3 dks ext to tail

*diagnostic characters, parasites, etc.

Location: Mtn. Brush Grid #: E Trap Night: 4 Checked By: WTT.

Date, Time Traps Set: 10/22/74 (1020) Date, Time Traps Checked: 10/23/74 (1015)

0202

Line Sta.	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-2		E. minimus	♀	A	–	0003 ✓	removed		5 d.s. extend to tail
A-8		E. "	♂	A		0001 ✓			5 d.s. extend to tail
A-12		C. gapperi	♀?	A		0202			red back
B-12		E. minimus	♂	A		0031 ✓			5 d.s. extend to ta
B-6		E. "	♂	A		0004 ✓			5 " " " "
B-4		E. "	♀	A		0002 ✓			5 " " " "
B-2		E. "	♂	A		0105	removed		5 " " " "
[illegible]-3		P. maniculata	♂	A		2004 ✓			bicolored tail
[illegible]-8		E. minimus	♂	A		0005 ✓			5 d.s. extend to tail
[illegible]-12		E. "	♀	A		0030 ✓	removed		5 " "
C-13		E. "	♀	A		0010 ✓	removed		5 "
[illegible]		E. "	♂	A		0033 ✓			5 " " "
D-8		E. "	♂	A		0102 ✓			5 " " "
F-3		P. maniculata	♂	A		0021			bicolored tail
F-7		E. minimus	♂	A		0100			5 d.s. extend to tail
F-8		P. maniculata	♂	A		0035			bicolored tail
9		P. "	♂	A		0041			" "
[illegible]-13		E. minimus	♀	A		0032			5 d.s. extend to tail
[illegible]-12		P. maniculata	♂	A		0020 ✓	Dead		bicolored tail
[illegible]-7		E. minimus	♀	A		0400			5 d.s. extend to tail
H-2		E. "	♀	A		0051			5 "
H-1		E. "	♀	A		0040			5 " "
J-1		E. "	♀	A		0011 ✓	–		5 " "
[illegible]		E. "	♂	A		0043			5 " "
J-3		E. "	♀	A		0040	✓		5 " " "

*diagnostic characters, parasites, etc.

ECI

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Mtn Brush Grid #: E Trap Night: 4 Checked By:

Time Traps Set: 2223 Date, Time Traps Checked:

ine Se	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
		Cont							
J-4		E. minimus	♂	A	1	0022	✓		5 dk [illegible] to tail
J-13		E. "	♂	A		0023	✓		5 " " "
K-12		E. "	♂	A		0205			5 " " .
L-2		E. "	♂	A		0203			5 " " "
-8		P. maniculata	♂	A		0045	✓		bicolored tail
-2		E. minimus	♂	A		0055	✓		5 dk [illegible] to tail
-12		E. "	?	A		0053	✓		5 " " "
M-8		P. maniculata	♂	A		0014	✓		bicolored tail
M-4		E. minimus	♂	A		0204			5 dk [illegible] to tail
J-11		E. "	♀	A		0034	✓		5 " " "
J-		E. "	♂	A		0022	✓		5 " " "
I-10		P. maniculata	♂	A		0103	✓		bicolored tail
G-7		P. "	♀	A		0104	✓		" "
E-4		P. "	♀	A		3000	✓		" "
-6		E. minimus	♂	A		0050	✓		5 dk [illegible] to tail
9		E. "	♀	A		0400	✓		5 dk [illegible] to tail
10		E. "	♀	A		0042	✓		5 " " "

agnostic characters, parasites, etc.

ECI

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Iocation: [illegible] Grid #: E Trap Night: 5 Checked By: WTT

Iate, Time Traps Set: 10/23/74 (1015) Date, Time Traps Checked: 10/24/74 ([illegible])

0205

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
		E. minimus ♀				0003	✓ mistake	Here	increased at P-J [illegible]
		E. minimus ♂				0105	added		
		E. minimus ♀				0030	in		[illegible]
		E. minimus ♀				0010			day
-5		E. minimus	♂	A		0055	✓		[illegible]
		E. "	♀	A		0010	✓		5 " " " "
-		E. "	♂	A		0200	DEAD		5 " " "
3		P. maniculatus	♂	A		0045	✓		bicolored tail
-2		E. minimus	♀	A		0044	✓		[illegible]
H7		E. "	♂	A		0100	DEAD		5 " " " "
-8		P. maniculatus	♂	A		0103	✓		5 " " "
-12		E. minimus	♂	A		0011	✓		5 " "
-13		E. "	♂	A		0023	✓		
-4		vole ? Lagurus curtatus	♀	A		0205		✓	[illegible]
-8		E. minimus	♂	A		0022	✓		[illegible]
-10		P. man	♂	A		0041	✓		[illegible]
7		E. minimus	♀	A		0400	✓		[illegible]
4		vole - [illegible] Lagurus curtatus	♂	A		0301	[illegible]		[illegible]
-5		P. maniculatus	♂	A		0021	✓		[illegible]
-8		E. minimus	♂	A		0005	✓		[illegible]
-10		E. "	♀	A		0042	✓		" " " "
-13		E. "	♀	A		0032	✓		" " "
-12		E. "	♂	A		0033	DEAD		" " "
		E. "	♂	A		0050	✓		" "
		P. maniculatus	♂	A		2000	✓		bicolored tail

*gnostic characters, parasites, etc.

ECI

ecology consultants, inc.

5.1.2.18-10

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Mtn Brush Grid #: E Trap Night: 5 Checked By: WTF

Date, Time Traps Set: Date, Time Traps Checked:

0302

Line Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
		Cont							
B-4	—	E. minimus	♀	A	–	0302			5 sts extend to tail
B-12		E. "	♂	A		0301	✓		5 " " "
F-12	—	C. gapperi	♀	A		0303			red back

*diagnostic characters, parasites, etc.

ECI

5.1.2.18-11

ECI
ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

1/22/74

~~0001~~
~~0002~~
~~[illegible]3~~
0004
0005

0010
~~0020~~
~~0030~~
~~0040~~
~~0050~~

~~0100~~
~~0200~~
~~0300~~
~~0400~~
~~1000~~

~~2000~~
~~3000~~
~~4000~~
~~0011~~
~~0012~~

~~0013~~
~~0014~~
~~[illegible]015~~
~~0021~~
0022

0023
0024
~~0025~~
~~0031~~
~~0032~~

~~0033~~
~~0034~~
~~0035~~
~~0041~~
~~0042~~

1/21/74

~~0043~~
~~0044~~
~~0045~~
~~0051~~
~~0052~~

~~0053~~
~~0054~~
~~0055~~
~~0101~~
~~0102~~

0103
~~0104~~
~~0105~~
~~0201~~
~~0202~~

[illegible]

0203
0204
0205
0301
0302

0303
0304
0305
0401
0402

0403
0404
0405
0110
0120

0130
0140
0150
0210
0220

0230
0240
0250
0310
0320

0330
0340
0350
0410
0420

0430
0440
0450
1001
1002

1003
1004
1005
1010
1020

1030
1040
1050
1100
1200

1300
1400
2001
2002
2003

2004
2005
2010
2020
2030

2040
2050
2100
2200
2300

2400
3001
3002
3003
3004

3005
3010
3020
3030
3040

3050
3100
3200
3300
3400

4001
4002
4003
4004
4005

4010
4020
4030
4040
4050

4100
4200
4300
4400
1011

1012
1013
1014
1015
1021

1022
1023
1024
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
1201

1202
1203
1204
1205
1301

1302
1304
1305
1401
1402

1403
1405
0111
0112
0113

0114
0115
0121
0122
0123

0124
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Mountain Brush Grid # E Project 83 Trap night 1

Date, time traps set 12/7/74 1100 Date, time traps checked 12/8/74 (1130)

Last toe clip # used on previous day 0204 Checked by TT

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-10	visit but no capture - mouse								
	"			"					

5.1.2.18-13
ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Mtn Brush Grid # E Project 83 Trap night 5

Date, time traps set 12/11/74 0900 Date, time traps checked 0930 12/12/74

L[illegible] toe clip # used on previous day 0204 Checked by JB | TT

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes

NO CAPTURES DURING DECEMBER TRAPPING PERIOD

sign of vole activity throughout grid
but few visitations to traps.

also abundant rabbit, coyote, deer tracks

Grid 19 - Douglas Fir (5.1.2.19)

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Doug Fir Grid #: F Trap Night: 1 Checked By: WTT

Date, Time Traps Set: (~~0:00~~ 13:35) 10/19/74 Date, Time Traps Checked: 10/20/74 (12:45)

ne et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
H-4		Clethrionomys gapperi	♂	A		0001			
-9		P. maniculatus	♂	A		0002			
-4		C. gapperi	♀	A		0003			
F-9		P. maniculatus	♀	A		0004			
F-10		C. gapperi	♀	A		0005			
E-5		C. "	♀	A		0010			
-5		C. "	♀	A		0020			

*diagnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 3.1.2.19-23

Location: Doug Fir Grid #: F Trap Night: 2 Checked By: L+T

Date, Time Traps Set: 10/20/74 (1240) Date, Time Traps Checked: 10/21/74 (1330)

0030

[illegible]	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
I-4		C. gapperi	♂	A	—	0030			red back
H-4		C. "	♂	A		0040-			" "
G-7		C. "	♂	A		0001✓			" "
G-4		C. "	♀	A		0003✓			" "
F-9		P. maniculatus	♀	A		0004✓	DEAD		bicolored tail
E-3		P. "	♂	A		0002✓			" "
E-7		C. gapperi	♂	A		0050			red back
D-5		C. "	♂	A		0100			" "
D-3		C. "	♀	A		0200			" "

iagnostic characters, parasites, etc.

ECI

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 5.1.2.14-3

Location: Doug Fir Grid #: F Trap Night: 3 Checked By: WTT

Date, Time Traps Set: 10/21/74 (1330) Date, Time Traps Checked: 10/22/74 (1305)

0300

ne Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
D-8		C. gapperi	♂?	A		0300			red back
E-7		C. "	♂?	A		0050✓			" "
F-4		C. "	♀?	A		0400			" "
G-7		C. "	♂?	A		1000			" "
G-9		P. maniculata	♂	A		0002✓			bi-colored tail
H-4		C. gapperi	♂?	A		0003✓			red back
I-5		C. "	♀?	A		0030✓			" "
I-6		C. "	♂	A		0001✓			" "

iagnostic characters, parasites, etc.

[illegible]

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Doug Fir Grid #: F Trap Night: 4 Checked By: WTT

Date, Time Traps Set: 10/22/74 (1305) 2000 Date, Time Traps Checked: 10/23/74 (1205)

Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
F-7		C. gapperi	♀?	A		2000	← red [illegible]	k!	red back
H-6		C. "	♂?	A		3000			
E-10		C. "	♂	A		4000			
E-7		C. "	♂	A		0010	✓		
G-6		C. "	♀?	A		1000	✓		
E-4		C. "	♀	A		0003	✓		
F-9		P. maniculat.	♂	A		0002	✓		[illegible]
E-10		C. gapperi	♀	A		0011			[illegible]
F-5		C. "	?	A		0010	✓ DEAD		
D-10		C. "	♀?	A		0012	DEAD		

*diagnostic characters, parasites, etc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

ocation: Dome Fir Grid #: F Trap Night: 5 Checked By: WTT

ate, Time Traps Set: 12/23/74 (1245) Date, Time Traps Checked: 1030 12/[illegible]

0013

ine Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
6-7		C. [illegible]	♂	A		0001 3001	NAT mark		red back
[illegible]		P. maniculata	♀	A		0013			[illegible]

nostic characters, parasites, etc.

5.1.2.19-6

ECI
ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

~~0001~~
~~0002~~
~~03~~
20/7- ~~0004~~
~~0005~~

~~0010~~
~~0020~~
~~0030~~
~~0040~~
~~0050~~
/21/7.

~~0100~~
0200
~~0300~~
~~0400~~
~~1000~~

~~2000~~ ?
3000
~~4000~~
0011
0012

/24/7 · 0013
~~0014~~
0015
0021
0022

0023
0024
0025
0031
0032

0033
0034
0035
0041
0042

0043
0044
0045
0051
0052

0053
0054
0055
0101
0102

0103
0104
0105
0201
0202

0203
0204
0205
0301
0302

0303
0304
0305
0401
0402

0403
0404
0405
0110
0120

0130
0140
0150
0210
0220

0230
0240
0250
0310
0320

0330
0340
0350
0410
0420

0430
0440
0450
1001
1002

1003
1004
1005
1010
1020

1030
1040
1050
1100
1200

1300
1400
2001
2002
2003

2004
2005
2010
2020
2030

2040
2050
2100
2200
2300

2400
~~3001~~
3002
3003
3004

3005
3010
3020
3030
3040

3050
3100
3200
3300
3400

4001
4002
4003
4004
4005

4010
4020
4030
4040
4050

4100
4200
4300
4400
1011

1012
1013
1014
1015
1021

1022
1023
1024
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
1201

1202
1203
1204
1205
1301

1302
1304
1305
1401
1402

1403
1405
0111
0112
0113

0114
0115
0121
0122
0123

0124
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Douglas Fir Grid # F Project 83 Trap night 1

Date, time traps set 12/7/74 1130 Date, time traps checked 1200 12/8/74

L[illegible] toe clip # used on previous day —— Checked by TT

start w/ 0103

apt. oc.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-3		visit							
-2		C. gapperi	0103	?	A	—			
-1		C. "	0104	?	A	—			
-3		C. "	0030 R	?	A				
F-5		visit							
F-6		visit							
-10		visit							
-9		"							
F-10		"							
F-13		"							
1-11		C gapperi	0105	?	A	-			
-10		C "	4000 R	?	A				
H-7		C. "	0201	?	A				

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Douglas Fir Grid # F Project 83 Trap night 2

Date, time traps set 12/8/74 1200 Date, time traps checked 12/9/74 1130

Last toe clip # used on previous day 0013 Checked by TT

t. .	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
		NO CAPTURES							

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Doug Fir Grid # F Project 83 Trap night 3

Date, time traps set 12/9/74 1130 Date, time traps checked 12/10/74 1200

La[illegible] toe clip # used on previous day 0013 Checked by Tom Turner, JBS

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
1-3		Clethrionomys gapperi	0400	?	adult	—			good shape
1-2		—" " "—	0014	?	"	—			"
2-6		—"—	0015	?	"	—			[illegible] clipped
4-7		—"—	0021	?	"				dead - took specimen

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Doug. Fir Grid # F Project 83 Trap night 4

Date, time traps set 12/10/74 1200 Date, time traps checked 12/11/74 1000

La toe clip # used on previous day 0021 Checked by JB/RDM

next-0022

apt. oc.	Total Weight	Species.	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		C. gapperi	0022		DEAD				

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Doug Fir Grid # F Project 83 Trap night 5

Date, time traps set 12/11/74 1000 Date, time traps checked 12/12/74 1000

La[illegible] toe clip # used on previous day 0022 Checked by JB / TT

pt. :.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
2		C gapperi	0103	?	A				
1		C. gapperi	0104	?	A				
10		P. maniculatus	0002	♂	A				
10		C. gapperi	0023	?	A				

Grid 20 - Aspen (5.1.2.20)

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET 3.1.2.20

Location: Asper Grid #: ~~AC~~ G Trap Night: I Checked By: WTT

Date, Time Traps Set: ~~(0200)~~ 10/19/74 Date, Time Traps Checked: 10/20/74 (1355)

Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
B-4		vole Microtus longicaudus	♂	A		0001	DEAD		DEAD TL. 150mm tail [illegible]
B-6		vole same as above M. l[illegible]	♀?	A		0002			TL. 131 m TAIL 40mm
A:9		Eutamias E. minimus	♀	A		0003			hf. 26mm
A-12		vole (same as above M. l[illegible]	♀	A		0004			b.l. 110m TL. 166 tail 56m
A-13		vole [illegible]	♂	A		0005			bl. 94m TL 138 tail 44
C-13		vole M. longicaudus	♂	A		0010	DEAD		TL 133 TAIL 44
C-12		vole M. longicaudus	♂	A		0020	DEAD		TL 133 TAIL 42
C-10		E. minimus	♀	A		0030			
C-7		E. "	♂	A		0040			
C-6		vole	escaped!						
C-5		C. gapperi	♀	A		0050			bl. 85 TL 121 T. [illegible]
C-4		E. minimus	♀	A		0100	in same trap!		
C-4		E. "	♂	A		0200			
C-3		E. "	escaped						
C-2		vole	♂?	A		0300			bl. 116 TL 164 tail 43

*diagnostic characters, parasites, etc.

ECI

ecology consultants, inc.

ecology consultants, inc.

3.1.2.20-2

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Aspen Grid #: ~~D4~~ G Trap Night: 2 Checked By: WTT

Date, Time Traps Set: 10/20/74 (1355 Date, Time Traps Checked: (1455) 10/21/74
0400

Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-2		P. maniculatus	♂	A		0400			bicolored tail
A-4		C. gapperi ?	?	A		0050 ✓			bl. 95 T.L 135 tail 40
B-4		M. longicaudus	♂	A	—	1000	—		bl 97 T.L 147 tail 50
A-5		M. longicaudus	♂ ?	A	—	2000	—		bl 108 T.L 165 tail 57
B-6	-	E. minimus	♂	A		3000	- -		5 d.s extend to tail
B-7		E. "	♀	A		0100 ✓			" " "
A-8	—	E. "	♀	A		0003 ✓			"
A-9		P. maniculatus	♂	A		4000			bicolored tail
A-11		M. longicaudus	♂	A		0011			bl 112 T.L 171 tail 59
A-13		E. minimus	♂	A		0012			5 d.s extend to tail
C-12		E. "	♀	A		0013			" "
C-12		M. longicaudus	♂	A		0014			bl. 97 t.l. 146 tail 49
C-11		M. " ?	♂	A		0015			bl. 102 t.l 148 tail 46
C-13		E. minimus	♂	A		0021			5 d.s extend to tail
C-7		E. "	♀	A		0022			" " "
C-4		E. "	♀	A		0023			" " "
C-3		C. gapperi	♂	A		0024			red back
C-2		M. longicaudus	♂	A		0124			bl 87 T.L 134 tail 47

*diagnostic characters, parasites, etc.

ECI

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: Aspen Grid #: ~~X~~ C Trap Night: 3 Checked By: WTT

Date, Time Traps Set: 10/21/74 (1455) Date, Time Traps Checked: (1430) 10/22/74

0025

ne Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
A-1		E minimus	♀			0025			5 d.s extend to tail
A-4		M. longicaudus	♂			0031			bl. 105 tl. 155 tail 50
A-5		M. "	♂			2000✓	DEAD		see prev. notes
B-3		E minimus	♂			0040✓			5 ds extend to tail
B-9		E. "	♀			0100✓			5 " " "
A-9		E "	♀			0003✓			5 " " "
A-12		E "	♀			0032			5 " " "
C-12		E "	♀			0033			5 " " "
C-10		E "	♀			0033✓	DEAD		5 " " "
C-9		M longicaudus	♂			0034			bl 115 tl 170 tail 55
C-7		E minimus	escaped						
C-4		E "	♀			0035			5 d.s extend to tail
C-3		E "	♂			0041			" " "
C-2		M. longicaudus	♂			0042			bl 102 TL 154 tail 52
C-1		M. "	♂			0043			

*diagnostic characters, parasites, etc.

3.1.2.DD4

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

cation: Acow Grid #: ~~D1~~ G Trap Night: 4 Checked By: WTT

ate, Time Traps Set: 10/22/74 (1430) Date, Time Traps Checked: 10/23/74 (1035)

0044

ine et	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
-5		[illegible]	[illegible]	[illegible]		[illegible]	R removed		[illegible]
-9		[illegible]	[illegible]	A		0040	R		" "
-4		M longicaudus	[illegible]	[illegible]		0015	R [illegible]		[illegible]
-9		M. "	[illegible]	[illegible]		00[illegible]			107 454 Tl: 161
-2		[illegible]	[illegible]	[illegible]		0025	R DEAD ~~[illegible]~~		
						[illegible]			

characters, parasites, etc.

5.1.2.20-5

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Location: [illegible] Grid #: ~~DK~~ G Trap Night: 5 Checked By: WTT

Date, Time Traps Set: 12/23/74 (1435) 0045 Date, Time Traps Checked: ([illegible]) 12/24/74

Line of Set	Total Weight	Species	Sex	Age Class	Repro. Status	Toe Clip No.	Trap Weight	Animal Weight	Additional Notes*
		C. [illegible]	♀			0023	> ADDED		
		~~C. [illegible]~~	~~♀~~			~~1025~~	Dead from previous day		
		NO CAPTURES!							

stic characters, parasites, etc.

ECI

5.1.2.20-6
ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING
TOE CLIP CHECKLIST

~~0001~~
0002
~~0003~~
~~0004~~
~~0005~~

~~0010~~
1/20/74 ~~0020~~
~~0030~~
~~0040~~
~~0050~~

~~0100~~
0200
0300
~~0400~~
~~1000~~

~~2000~~
~~3000~~
4000
1/21/74 ~~0011~~
~~0012~~

~~0013~~
0014
0015
~~0021~~
0022

0023
0024
~~0025~~
~~0031~~
~~0032~~

0033
0034
~~0035~~
0041
1/22/74 0042

~~0043~~
1/23 ~~0044~~
0045
0051
0052

0053
0054
0055
0101
0102

0103
0104
0105
0201
0202

0203
0204
0205
0301
0302

0303
0304
0305
0401
0402

0403
0404
0405
0110
0120

0130
0140
0150
0210
0220

0230
0240
0250
0310
0320

0330
0340
0350
0410
0420

0430
0440
0450
1001
1002

1003
1004
1005
1010
1020

1030
1040
1050
1100
1200

1300
1400
2001
2002
2003

2004
2005
2010
2020
2030

2040
2050
2100
2200
2300

2400
3001
3002
3003
3004

3005
3010
3020
3030
3040

3050
3100
3200
3300
3400

4001
4002
4003
4004
4005

4010
4020
4030
4040
4050

4100
4200
4300
4400
1011

1012
1013
1014
1015
1021

1022
1023
1024
1025
1031

1032
1033
1034
1035
1041

1042
1043
1044
1045
1051

1052
1053
1054
1055
1101

1102
1103
1104
1105
1201

1202
1203
1204
1205
1301

1302
1304
1305
1401
1402

1403
1405
0111
0112
0113

0114
0115
0121
0122
0123

10/22/ ~~0124~~ 2
0125
0131
0132
0133

0134
0135
0141
0142
0143

0145
0151
0152
0153
0154

0155
0211
0212
0213
0214

0215
0221
0222
0223
0224

0225
0231
0232
0233
0234

0235
0241
0242
0243
0244

0245
0251
0252
0253
0254

0255
0311
0312
0313
0314

0315
0321
0322
0323
0324

0325
0331
0332
0333
0334

0335
0341
0342
0343
0344

0345
0351
0352
0353
0354

0355
0411
0412
0413
0414

0415
0421
0422
0423
0424

0425
0431
0432
0433
0434

0435
0441
0442
0443
0444

0445
0451
0452
0453
0454

0455
1111
1112
1113
1114

1115
1121
1122
1123
1124

1125
1131
1132
1133
1134

1135
1141
1142
1143
1144

1145
1151
1152
1153
1154

1155
1211
1212
1213
1214

1215
1221
1222
1223
1224

1225
1231
1232
1233
1234

1235
1241
1242
1243
1244

1245
1251
1252
1253
1254

1255
1311
1312
1313
1314

1315
1321
1322
1323
1324

1325
1331
1332
1333
1334

1335
1341
1342
1343
1344

1345
1351
1352
1353
1354

1355
1411
1412
1413
1414

1415
1421
1422
1423
1424

1425
1431
1432
1433
1434

1435
1441
1442
1443
1444

1445
1451
1452
1453
1454

1455
2111
2112
2113
2114

2115
2121
2122
2123
2124

2125
2131
2132
2133
2134

2135
2141
2142
2143
2144

2145
2151
2152
2153
2154

ecology consultants, inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Aspen Grid # G Project 83 Trap night 1

Date, time traps set 12/7/74 1300 Date, time traps checked 12/8/74 0330

La , toe clip # used on previous day 0044 Checked by Tyre

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		visit							
-4		"							
-5		"							5
-8		vole ? M. montanus	0044	?	A				ta.l 50 bl. 105
-9		vole M montanus	0045	?	A				ta.l 45 b.l 100
-9		M. montanus	0051	?	B				ta.l 45 b.l 93 trap killed
-10		visit							
-10	-	M. montanus	0052	?	A				ta.l 45 b.l 93
-11		M. "	0053	?	A				ta.l 51
-12		visit							
-13		"							
11		"							
		M. montanus	0054	?	A				
-7		C. gapperi	0055	?	A				
-6		M. montanus	0101	?	A		Same		tail 45
-6		C. gapperi	0102	?	A	DEAD	trap		M. montanus killed C. gapperi
-3		visit - trap	closed.						
-2		visit							
-1		visit							

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Aspen Grid # G Project 83 Trap night 2

Date, time traps set 12/8/74 1330 Date, time traps checked 12/9/74 1230

Last toe clip # used on previous day 0102 Checked by JT

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		M. montanus	0103	?	A				hf. 20/t. 50/b. 110
-11		M. montanus	0011	?	A				hf 20/t 50/b 100
-12		M. montanus	0104	?					
9		M. montanus	0054	?	A				DEAD tal 50
5		C. gapperi	0055	used as			bait		
1		C. gapperi	0105	?			for		
							weasel		

ecology consultants, In

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Aspen Grid # G Project 83 Trap night 3

Date, time traps set 12/9/74 (1230) Date, time traps checked 12/10/74 1230

t toe clip # used on previous day 0105 Checked by JBS/TT

apt. oc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		M. montan.	0103 R	?	A				
-6		M. montan.	0201	?	A				+ 50
-8		M. montan	0202	?	A				+ 50
-17		M mon	0203	?	A				+ 55
C-11		M. mon	0204	?	A				+ 50
-3		C. gapperi	0140	?	A				DEAD

ecology consultants, Inc.

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Aspen Grid # G Project 83 Trap night 4

Date, time traps set 12/10/74 1230 Date, time traps checked 12/11/74 1030

toe clip # used on previous day 0204 Checked by JB /RDM
next 0205

pt. c.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-1		C. gapperi	0402 none	?	A				DEAD
-1.		C. gapperi	0105	?	A				~~T~~
-8		M. mont.	0205	?	A				T. 50
-12		M. mont	0301	?	A				T. 45
-13		M. mont. (?)	0302	?	A				T. 55
-9		M. mont	0303	?	A				T. 45
-8		M. mont	0044	?	A				T 50
-6		M. mont.	0304	?	A				T 50
-5		M. mont	0305	?	A				T 45
-4		M. mont.	0401	?	A				T. 50 None

ecology consultants, Inc

SMALL MAMMAL LIVE TRAPPING FIELD DATA SHEET

Grid name Aspen Grid # G Project 83 Trap night 5

Date, time traps set 12/11/74 1030 Date, time traps checked 1130 12/12/74

L[illegible] toe clip # used on previous day 0402 0403 Checked by

Capt. Loc.	Total Weight	Species	Toe Clip No.	Sex	Age Class	Reprod. Status	Trap Weight	Animal Weight	Additional Notes
-7		M. montanus	0403	?	A				b=45 t=50
-7		M. montanus	0404	?	A				b=110 t=50
-12		M. montanus	0405	?	A				b=90 t=46
-10		M. montanus	0110	?	A				b=90 t=45
-1		C. gapperi	0120	?	A				

II. SMALL MAMMALS

B. Removal Trapping

ANALYSIS AND FILE NUMBER

Stomach Analysis - November 1974 (5.2.2.1.1)
Stomach Analysis - December 1974 (5.2.2.1.2)

Stomach Analysis - November 1974 (5.2.2.1.1)

3.2.2.1.1-1

ECI
ecology sultants, Inc.

STOMACH ANALYSIS DATA SHEET

Project 83 Date Nov 1974 Investigator RM/GAR

Location Bottomland Meadow Habitat Bottomland Meadow

Capture Technique Snap-trap.

Comments

Species Microtus montanus

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	Su	I	Su			11	Su	Su	Su			21	Su	Su	Su			31	Su	Su	S			41	S	Su	Su		
2	Su	Su	Su			12	Su	S	Su			22	Su	S	Su			32	Su	Su	Su			42	–	S	Su		
3	Su	Su	Su			13	Su	Su	Su			23	Su	Su	Su			33	S	Su	–			43	Su	Su	Su		
4	Su	Su	S			14	Su	Su	S			24	Su	Su	Su			34	Su	S	Su			44	Su	S	Su		
5	Su	Su	Su			15	Su	Su	Su			25	Su	Su	Su			35	Su	Su	Su			45	Su	Su	Su		
6	Su	S	S			16	Su	S	Su			26	Su	Su	S			36	–	Su	Su			46	Su	Su	Su		
7	Su	S	S			17	Su	Su	Su			27	Su	S	Su			37	Su	Su	Su			47	Su	Su	Su		
8	Su	S	Su			18	Su	Su	Su			28	Su	Su	Su			38	Su	Su	Su			48	–	S	Su		
9	Su	Su	Su			19	Su	Su	Su			29	S	Su	Su			39	Su	S	–			49	Su	S	S		
10	Su	Su	S			20	Su	Su	Su			30	Su	Su	Su			40	Su	Su	Su			50	–	S	Su		

	Measurements						Food Categories				
	Sex	TL	T	HF	E	grams	–	V	I	Su	S
A	♂	115	27	19	12	20.2	8%	-	-	86%	6%
B	♂	147	34	19	14	35.9	-	-	2%	70%	28
C	♂	136	31	18	14	32.4		-4%	-	80	16%
D											
E											

Food Categories	Symbol	Total % F
Empty fields	–	2.6%
Vertebrate	V	-
Invertebrate	I	2.0%
Succulent	Su	78.6 %
Seed	S	16.7%

C 5 2 2 1 1

5.2.2.11-2 ECI

ecology nsultants, Inc.

STOMACH ANALYSES DATA SHEET

Project 83 Date Nov 1974 Investigator WTT / G.AR.

Location GRID A Habitat GREASEWOOD - SAGE

Capture Technique Snap - Trap

Comments

Species *Peromyscus maniculatus*

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	Su	S	S	S	S	11	S	S	S	S	S	21	S	S	S	S	S	31	S	S	S	S	S	41	S	Su	S	S	S
2	S	S	S	S	S	12	S	Su	S	S	S	22	S	–	S	–	S	32	S	S	S	S	S	42	S	S	S	S	S
3	S	S	S	S	S	13	–	S	S	S	S	23	–	–	S	S	S	33	S	–	S	S	S	43	S	S	S	I	S
4	S	S	S	S	S	14	S	S	S	S	S	24	Su	–	Su	S	S	34	S	S	S	V	–	44	S	S	S	S	–
5	Su	-	S	S	S	15	S	Su	S	Su	S	25	S	S	S	S	S	35	S	S	S	S	S	45	S	S	S	S	S
6	–	S	S	V	S	16	S	S	Su	Su	S	26	S	S	S	S	S	36	S	S	S	S	S	46	S	S	S	S	S
7	S	S	Su	S	S	17	S	S	–	S	S	27	Su	S	S	S	S	37	S	S	S	Su	V	47	S	S	S	S	Su
8	S	S	S	Su	S	18	S	S	S	S	S	28	–	S	S	S	Su	38	S	Su	S	S	Su	48	S	–	S	S	S
9	–	–	S	S	S	19	Su	S	S	S	S	29	S	S	S	S	S	39	Su	S	S	S	S	49	S	S	S	S	S
10	S	S	S	S	S	20	–	S	S	S	S	30	S	S	S	S	V	40	–	S	I	S	S	50	S	S	S	V	S

	Measurements						Food Categories				
	Sex	TL	T	HF	E	grams	-	V	I	Su	S
A	♀	148	66	21	16	15.8	14%	–	–	12%	74%
B	♀	145	61	19	14	16.5	14%	–	–	8%	78%
C	♀	144	61	21	14	14.3	2%	–	2%	6%	90%
D	♂	148	67	21	14	15.3	2%	6%	2%	8%	82%
E	♀	152	61	19	14	19.0	4%	4%	–	6%	86%

Food Categories	Symbol	Total % F
Empty fields	-	7.2%
Vertebrate	V	2%
Invertebrate	I	.8%
Succulent	Su	8%
Seed	S	82%

STOMACH ANALYSIS DATA SHEET

Project 83 Date Nov 1974 Investigator RBS/GAR

Location GRID A Habitat Greasewood - Sage

Capture Technique Snap - trap

Comments

Species Microtus montanus

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	Su	S				11	Su	S				21	Su	—				31	S	S				41	Su	S			
2	Su	S				12	Su	S				22	Su	S				32	Su	S				42	Su	—			
3	Su	S				13	Su	S				23	Su	S				33	Su	S				43	Su	S			
4	Su	S				14	Su	S				24	Su	S				34	Su	Su				44	Su	S			
5	Su	S				15	Su	S				25	S	S				35	Su	S				45	Su	S			
6	Su	S				16	Su	Su				26	Su	S				36	Su	S				46	Su	S			
7	Su	S				17	Su	S				27	Su	S				37	V	S				47	Su	S			
8	Su	Su				18	Su	S				28	Su	Su				38	Su	Su				48	Su	S			
9	Su	S				19	Su	S				29	Su	S				39	Su	S				49	Su	S			
10	Su	S				20	Su	S				30	Su	S				40	Su	S				50	Su	S			

Measurements							Food Categories				
	Sex	TL	T	HF	E	grams	–	V	I	Su	S
A	♀	149	33	18	13	36.6	-	2%	-	94%	4%
B	♀	124	30	19	13	22.6	2%	-	-	10%	88%
C											
D											
E											

Food Categories	Symbol	Total % F
Empty fields	–	1%
Vertebrate	V	1%
Invertebrate	I	-
Succulent	Su	52%
Seed	S	46%

5.2.2.1.[illegible]4

ECI ecology [illegible]nsultants, inc.

STOMACH ANALY[illegible]S DATA SHEET

Project 83 Date Nov 1974 Investigator WTT /GAR

Location near GRID I Habitat Sage hillside

Capture Technique Snap-trap

Comments

Species Peromyscus maniculatus

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	S	Su	S	S	S	11	S	S	Su	S	S	21	S	S	S	S	—	31	S	S	Su	Su	—	41	S	Su	Su	S	S
2	S	Su	S	S	S	12	S	Su	S	S	S	22	Su	S	S	S	Su	32	S	S	S	Su	—	42	Su	S	S	Su	S
3	S	Su	—	S	S	13	S	Su	S	S	S	23	S	S	S	S	S	33	Su	S	Su	S	S	43	Su	S	Su	S	—
4	Su	S	S	S	Su	14	S	Su	S	Su	S	24	S	Su	—	S	S	34	V	S	S	Su	S	44	S	S	—	S	Su
5	Su	S	S	Su	S	15	S	Su	S	S	S	25	Su	S	—	Su	S	35	S	S	Su	—	Su	45	Su	S	S	S	Su
6	Su	Su	S	S	S	16	S	Su	S	S	S	26	S	Su	S	Su	S	36	I	Su	S	S	S	46	Su	S	—	S	S
7	S	Su	S	S	V	17	S	S	S	—	S	27	S	Su	S	S	—	37	S	S	—	S	Su	47	—	S	Su	—	S
8	S	S	Su	S	S	18	S	Su	Su	S	—	28	S	S	Su	Su	S	38	S	S	S	S	—	48	S	S	S	—	S
9	Su	S	S	S	S	19	S	Su	S	Su	S	29	S	S	S	S	S	39	Su	S	S	Su	S	49	—	S	S	S	S
10	S	Su	S	S	S	20	S	Su	S	S	S	30	S	Su	S	S	Su	40	Su	S	Su	S	—	50	S	S	S	S	S

	Measurements						Food Categories				
	Sex	TL	T	HF	E	grams	-	V	I	Su	S
A	♂	143	52	21	14	16.8	4%	2%	2%	26%	66%
B	♂	142	51	20	17	17.6	-	-	-	40%	60%
C	♂	143	51	21	15	17.3	8%	-	-	22%	70%
D	♀	140	55	19	15	15.2	8%			20%	72%
E	♀	146	55	21	17	17.3	16%	-	2%	14%	[illegible]

Food Categories	Symbol	Total % F
Empty fields	-	7.2%
Vertebrate	V	.8%
Invertebrate	I	.4%
Succulent	Su	24.4%
Seed	S	67.2%

ECI
ecology sultants, Inc.

STOMACH ANALY DATA SHEET

Project 83 Date Nov 1974 Investigator WTT/GAR

Location South P.J Habitat Pinyon - Juniper

Capture Technique Snap-trap

Comments

Species Peromyscus maniculatus

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	S	S	S	S	S	11	Su	S	S	Su	S	21	I	—	S	S	S	31	Su	S	S	S	S	41	V	S	S	S	I
2	S	S	S	S	S	12	S	Su	S	Su	S	22	S	S	S	S	S	32	S	S	Su	S	—	42	Su	S	S	S	—
3	S	S	S	S	S	13	S	Su	—	S	S	23	S	S	S	S	S	33	S	S	S	S	S	43	Su	S	Su	S	I
4	S	—	Su	S	S	14	S	S	S	S	S	24	S	S	—	Su	S	34	S	S	S	S	S	44	S	Su	Su	S	I
5	S	S	Su	S	S	15	Su	S	Su	S	I	25	S	S	—	S	Su	35	Su	S	S	S	S	45	—	S	Su	S	I
6	S	S	S	S	I	16	S	S	S	S	S	26	Su	S	Su	S	Su	36	—	S	—	S	S	46	Su	S	V	S	S
7	S	S	S	S	S	17	S	S	S	S	S	27	S	S	S	S	S	37	—	S	Su	S	S	47	S	Su	S	S	I
8	S	S	—	S	S	18	S	S	S	S	S	28	S	Su	S	S	S	38	—	S	Su	S	S	48	S	S	S	S	I
9	S	S	S	S	S	19	S	Su	—	S	S	29	Su	S	S	S	S	39	S	S	—	S	—	49	Su	Su	Su	—	S
10	S	S	S	S	S	20	S	S	Su	S	S	30	Su	S	S	S	S	40	S	S	S	S	S	50	S	S	—	S	I

	Measurements						Food Categories				
	Sex	TL	T	HF	E	grams	-	V	I	Su	S
A	♂	154	62	21	15	19.4	8%	2%	2%	22%	66%
B	♂	147	56	21	17	16.0	4%	-	-	14%	82%
C	♀	162	69	20	14	20.4	16%	2%		24%	58%
D	♀	153	64	20	16	18.6	2%	-	-	6%	92%
E	♂	140	55	19	14	17.1	6%	-	18%	6%	70%

Food Categories	Symbol	Total % F
Empty fields	-	7.2%
Vertebrate	V	.8%
Invertebrate	I	4.0%
Succulent	Su	14.4%
Seed	S	73.6%

Stomach Analysis - December 1974 (5.2.2.1.2)

2.2.2.1.2 – 1

ECI
ecology c nsultants, inc.

STOMACH ANALYSIS DATA SHEET

Project 83 Date Dec 1974 Investigator JCC/GAR

Location Sage Habitat Sage

Capture Technique Snap-Trap

Comments

Species Peromyscus maniculatus

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	S	S	S	Su	S	11	S	S	S	S	V	21	Su	S	S	S	S	31	S	S	S	S	–	41	S	S	S	Su	S
2	S	S	S	Su	S	12	S	S	S	Su	S	22	V	S	S	Su	S	32	S	S	S	Su	S	42	S	S	S	Su	S
3	S	S	S	Su	S	13	S	S	S	S	S	23	S	S	S	S	Su	33	Su	S	S	S	S	43	S	S	S	Su	Su
4	S	S	S	S	S	14	S	S	S	S	I	24	S	S	S	Su	S	34	V	S	S	S	S	44	Su	S	S	Su	S
5	I	S	S	S	S	15	S	S	S	S	I	25	S	V	S	Su	I	35	S	V	S	S	I	45	S	V	S	S	S
6	S	S	S	Su	S	16	S	V	S	S	S	26	S	–	V	–	S	36	S	S	S	S	S	46	S	S	S	–	S
7	S	S	S	Su	S	17	S	S	S	Su	Su	27	V	S	S	S	S	37	S	S	S	–	S	47	S	S	S	Su	S
8	S	S	Su	S	S	18	S	S	S	Su	S	28	S	S	S	S	V	38	Su	S	S	Su	S	48	S	S	S	S	S
9	S	S	S	Su	S	19	S	S	S	Su	S	29	S	S	S	S	S	39	S	S	S	Su	–	49	S	S	S	S	S
10	Su	S	V	Su	I	20	S	V	S	Su	S	30	S	S	S	S	–	40	S	S	S	Su	S	50	S	S	S	Su	S

	Measurements						Food Categories				
	Sex	TL	T	HF	E	grams	–	V	I	Su	S
A	♂	154	67	20	17	16.0	–	6%	2%	10%	82%
B	♀	149	61	20	18	15.4	2%	10%	-	-	88%
C	♀	147	63	21	14	16.3	-	4%	-	2%	94%
D	♂	151	64	21	16	18.0	6%	-	-	50%	44%
E	♂	141	59	19	15	16.0	6%	4%	10%	6%	74%

Food Categories	Symbol	Total % F
Empty fields	–	2.8%
Vertebrate	V	4.8%
Invertebrate	I	2.4%
Succulent	Su	13.6%
Seed	S	76.4%

C – 1.2.

5.2.2. 7-2 ECI

ecology [illegible]sultants, inc.

STOMACH ANALYSIS DATA SHEET

Project 83 Date Dec 1974 Investigator WTT/GAR

Location South P.J. Habitat Pinyon - Juniper

Capture Technique Snap - trap

Comments

Species Peromyscus maniculatus

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	S	S				11	S	S				21	S	Su				31	S	S				41	S	S			
2	S	S				12	S	S				22	S	S				32	S	S				42	S	S			
3	–	S				13	S	S				23	Su	S				33	S	S				43	S	I			
4	S	S				14	S	I				24	S	S				34	S	S				44	S	Su			
5	S	S				15	S	S				25	V	S				35	S	I				45	S	S			
6	S	S				16	S	S				26	S	S				36	S	Su				46	S	S			
7	S	I				17	Su	S				27	S	S				37	V	S				47	Su	S			
8	S	I				18	S	I				28	S	S				38	S	S				48	S	V			
9	S	S				19	S	S				29	S	S				39	S	S				49	S	S			
10	S	S				20	S	S				30	S	Su				40	S	Su				50	S	S			

	Measurements						Food Categories				
	Sex	TL	T	HF	E	grams	–	V	I	Su	S
A	♂	154	68	20	19	16.4	2%	4%	–	6%	88%
B	♂	155	68	21	16	17.7	–	2%	12%	10%	76%
C											
D											
E											

Food Categories	Symbol	Total % F
Empty fields	–	1%
Vertebrate	V	3%
Invertebrate	I	6%
Succulent	Su	8%
Seed	S	82%

S.2.2.1.2-

ECI
ecology nsultants, Inc.

STOMACH ANALY S DATA SHEET

Project 83 Date Dec 1974 Investigator WTT / GAR
Location South P-J Habitat Pinyon - Juniper
Capture Technique Snap- trap
Comments

Species Eutamias minimus

	A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E		A	B	C	D	E
1	S					11	S					21	V-h					31	S					41	—				
2	S					12	S					22	S					32	S					42	—				
3	S					13	S					23	S					33	—					43	S				
4	S					14	S					24	S					34	—					44	S				
5	S					15	S					25	S					35	—					45	S				
6	—					16	S					26	S					36	—					46	S				
7	S					17	S					27	S					37	S					47	S				
8	S					18	S					28	S					38	S					48	S				
9	S					19	S					29	S					39	S					49	S				
10	S					20	S					30	S					40	S					50	S				

	Measurements						Food Categories				
	Sex	TL	T	HF	E	grams	–	V	I	Su	S
A	♀	182	73	28	12	30.6	14%	2%	-	-	84%
B											
C											
D											
E											

Food Categories	Symbol	Total % F
Empty fields	-	14%
Vertebrate	V	2%
Invertebrate	I	–
Succulent	Su	–
Seed	S	84%

II. SMALL MAMMALS

Pitfall Trapping (5.3.2)

2.3.2 1

SMALL MAMMAL PITFALL FIELD DATA SHEET

Pitfall Number D Location Sage

Sampling Period 1 Project Number 83 Checked By J. B

Date	Species	Sex	Age	Comments*
20. Oct	Sorex merriami	?	?	lab I.D.
21 Oct	Sorex cinereus	?	?	lab I.D

*Reproductive condition, diagnostic characters, future use of specimens, etc.

ECI
ecology consultants, inc.

SMALL MAMMAL PITFALL FIELD DATA SHEET

itfall Number A Location Greasewood - Sage

ampling Period 1 Project Number 83 Checked By B.S.

te	Species	Sex	Age	Comments*
24 Oct	Sorex cinereus	?	?	Lab I.D.

*Reproductive condition, diagnostic characters, future use of specimens, etc.

ECI
ecology consultants, Inc.

5.3.2-3

SMALL MAMMAL PITFALL FIELD DATA SHEET

itfall Number A Location Greasewood - Sage

ampling Period 2 Project Number 83 Checked By J. C

[illegible]	Species	Sex	Age	Comments*
12 Dec	Sorex cinereus	?	?	for lab I.D.
12 Dec	Sorex cinereus	?	?	for lab I.D.

*Reproductive condition, diagnostic characters, future use of specimens, etc.

ECI

ecology consultants, Inc.

II. SMALL MAMMALS

D. Night Spotlight Census (5.4.2)

5.4.2-1

MAMMAL NIGHT ROAD CENSUS DATA AND SUMMARY SHEET

Project 83 Transect # 1 Date 10 FEB 75 Sunset Time ____

Time Begun 11:00 Temp. 30° Time Completed 1:20 Temp. 30° Cloud Cover 0 %

Starting Point old H.Q. Finish Point 84 mesa Length of Transect 9 mi

Observable Distance Estimates up to 25 meters.

Mile 1 12 m; 2 5; 3 8; 4 8; 5 5; 6 5; 7 12; 8 15; 9 15; 10 ___;

11 ___; 12 ___; 13 ___; 14 ___; 15 ___; 16 ___; 17 ___; 18 ___; 19 ___; 20 ___;

21 ___; 22 ___; 23 ___; 24 ___; 25 ___; 26 ___; 27 ___; 28 ___; 29 ___; 30 ___.

Odometer Reading	Species Observed	Habitat	Odometer Reading		Species Observed	Habitat
29.4						
↓	NOTHING OBSERVED					
38.4						

1. $\overline{x}$ est. dist. ____ m. x transect length ____ m. = ____ sq. m. of coverage.

2. $\frac{\text{sq. m. coverage}}{\text{sq. m./hectare}} = \frac{\_\_\_\_}{10{,}000} =$ ____ hectares; $N = \frac{\text{number sited}}{\text{total hectares}} =$ ____ /hectare.

Species	No. Sighted	Hectares Covered	Pop. Est./Hectare

5.4.2.-2

MAMMAL NIGHT ROAD CENSUS DATA AND SUMMARY SHEET

Project 83 Transect # 1 Date 11/11/74 Sunset Time 4:50

Time Begun 8:50 Temp. ~35 Time Completed ~ 12:00 Temp. ~30 Cloud Cover 0 %

t ting Point 84 mesa road Finish Point cath. bluffs Length of Transect 15 mi

Observable Distance Estimates up to 25 meters.

Mile 1 22.5 ; 2 25.0 ; 3 22.3 ; 4 15 ; 5 10 ; 6 20 ; 7 20 ; 8 15 ; 9 8 ; 10 20 ;

11 18 ; 12 23.0 ; 13 15 ; 14 5 ; 15 5 ; 16 ___ ; 17 ___ ; 18 ___ ; 19 ___ ; 20 ___ ;

21 ___ ; 22 ___ ; 23 ___ ; 24 ___ ; 25 ___ ; 26 ___ ; 27 ___ ; 28 ___ ; 29 ___ ; 30 ___ .

Odometer Reading	Species Observed	Habitat	Odometer Reading	Species Observed	Habitat
27.7	2 deer	hillside, S. slope			
36.3	6 horses	upland sage			
36.8	5 deer	sage mt. brush			
38.7	1 deer	" " "			
		No LAGOMORPHS			

1. $\overline{x}$ est. dist.______ m. x transect length______ m. = _______ sq. m. of coverage.

2. $\frac{\text{sq. m. coverage}}{\text{sq. m./hectare}} = \frac{\qquad}{10{,}000} =$ _______ hectares; $N = \frac{\text{number sited}}{\text{total hectares}} =$ _______ /hectare.

Species	No. Sighted	Hectares Covered	Pop. Est./Hectare

These species not sampled by this method.

5.4.2-3

MAMMAL NIGHT ROAD CENSUS DATA AND SUMMARY SHEET

Project 83 Transect # 2 Date 11/13/74 Sunset Time 4:55

Time Begun 8:00 Temp. ~30° Time Completed ~2:00 Temp. ~25° Cloud Cover 0

Starting Point 85.2 84 mesa Finish Point cat. road Length of Transect 30 mi.

Observable Distance Estimates up to 25 meters.

Mile 1 22.5; 2 25.0; 3 22.3; 4 15; 5 10; 6 20; 7 20; 8 15; 9 8; 10 20;
11 18; 12 23; 13 15; 14 5; 15 5; cat road 16 15; 17 12; 18 15; 19 15; 20 10;
21 15; 22 10; 23 12; 24 10; 25 12; 26 15; 27 10; 28 10; 29 10; 30 10.

Odometer Reading	Species Observed	Habitat	Odometer Reading	Species Observed	Habitat
90.9	2 deer	sage			
96.6	cottontail	sage - P.J			
97.8	cottontail	sage / mt. brush			
Cat Road, begin transect 16.3					
19.9	cottontail	P.J			
29.6	w.t. jack rabbit	sage			

1. $\overline{x}$ est. dist. 14.16 m. x transect length 48,270 m. = 683,503.2 sq. m. of coverage.

2. $\frac{\text{sq. m. coverage}}{\text{sq. m./hectare}} = \frac{683,503.2}{10,000} =$ 68.35 hectares; $N = \frac{\text{number sited}}{\text{total hectares}} =$ ______/hectare.

Species	No. Sighted	Hectares Covered	Pop. Est./Hectare
cottontail	3	68.35	0.04
whitetailed jack	1	68.35	0.01

MAMMAL NIGHT ROAD CENSUS DATA AND SUMMARY SHEET

5.4.2-4

Project 83 Transect # 2 Date 12-FEB-75 Sunset Time ______

Time Begun 7:20 Temp. 30° Time Completed 9:05 Temp. 30° Cloud Cover 100

Starting Point old O.S. H.Q. Finish Point 84 mesa Length of Transect 9 mi

Observable Distance Estimates up to 25 meters.

Mile 1 12; 2 5; 3 8; 4 6; 5 8; 6 10; 7 12; 8 12; 9 12; 10 ____;

11 ____; 12 ____; 13 ____; 14 ____; 15 ____; 16 ____; 17 ____; 18 ____; 19 ____; 20 ____;

21 ____; 22 ____; 23 ____; 24 ____; 25 ____; 26 ____; 27 ____; 28 ____; 29 ____; 30 ____.

Odometer Reading	Species Observed	Habitat	Odometer Reading		Species Observed	Habitat
	NOTHING	OBSERVED				

1. $\bar{x}$ est. dist. ______ m. x transect length ______ m. = ______ sq. m. of coverage.

2. $\frac{\text{sq. m. coverage}}{\text{sq. m./hectare}} = \frac{\_\_\_\_}{10,000} =$ ______ hectares; $N = \frac{\text{number sited}}{\text{total hectares}} =$ ______ /hectare.

Species	No. Sighted	Hectares Covered	Pop. Est./Hectare

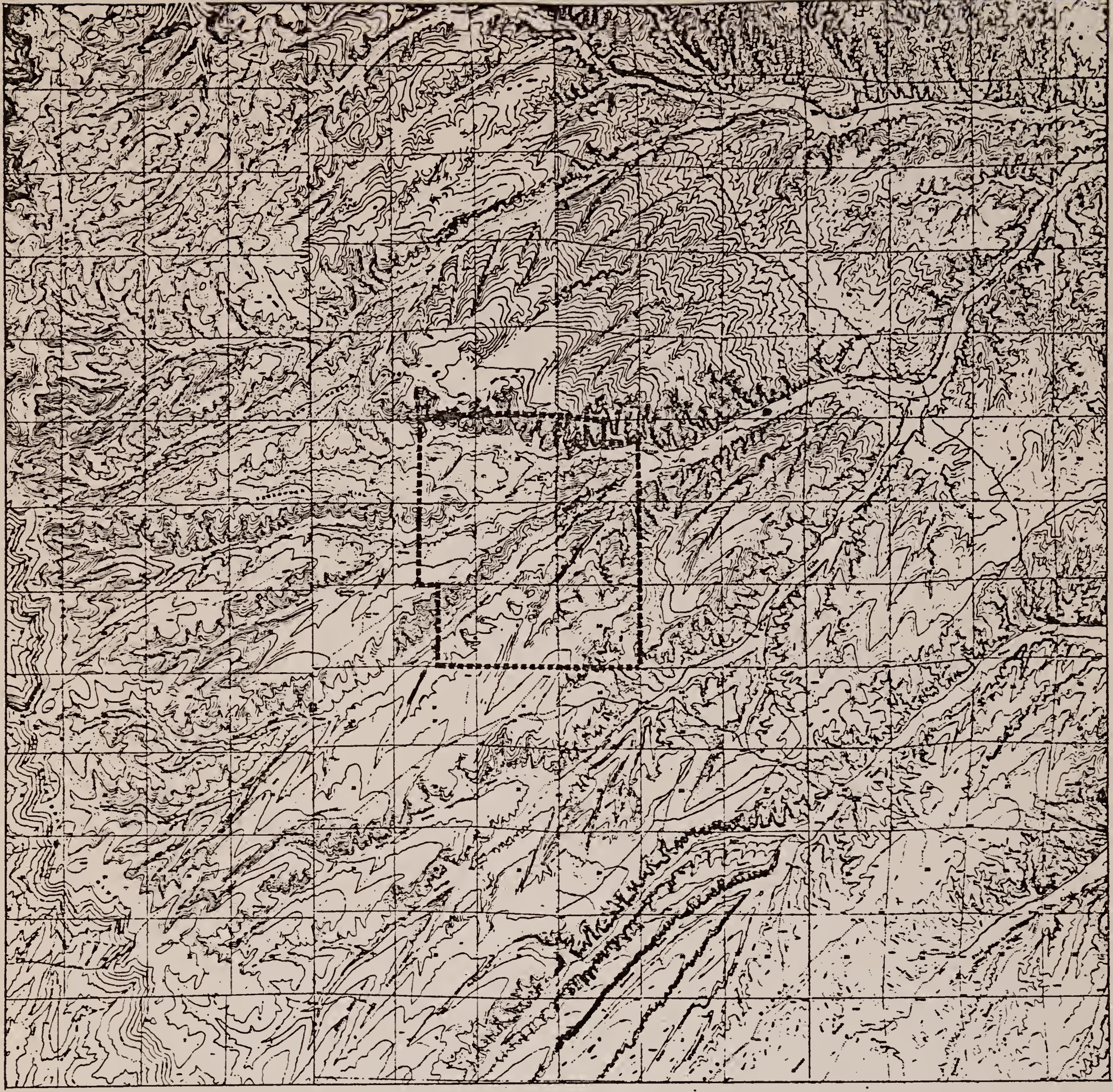
C. Small Mammals (14.1.1)

Distribution Records

14.1.1

1a

FIELD OBSERVATIONS



Species Sylvilagus sp Date 10/12/74 Time —

Means of Identification Obs

Number Observed 1 ♂ ____ ♀ ____

Adult ____ Juv. ____

Habitat Sage

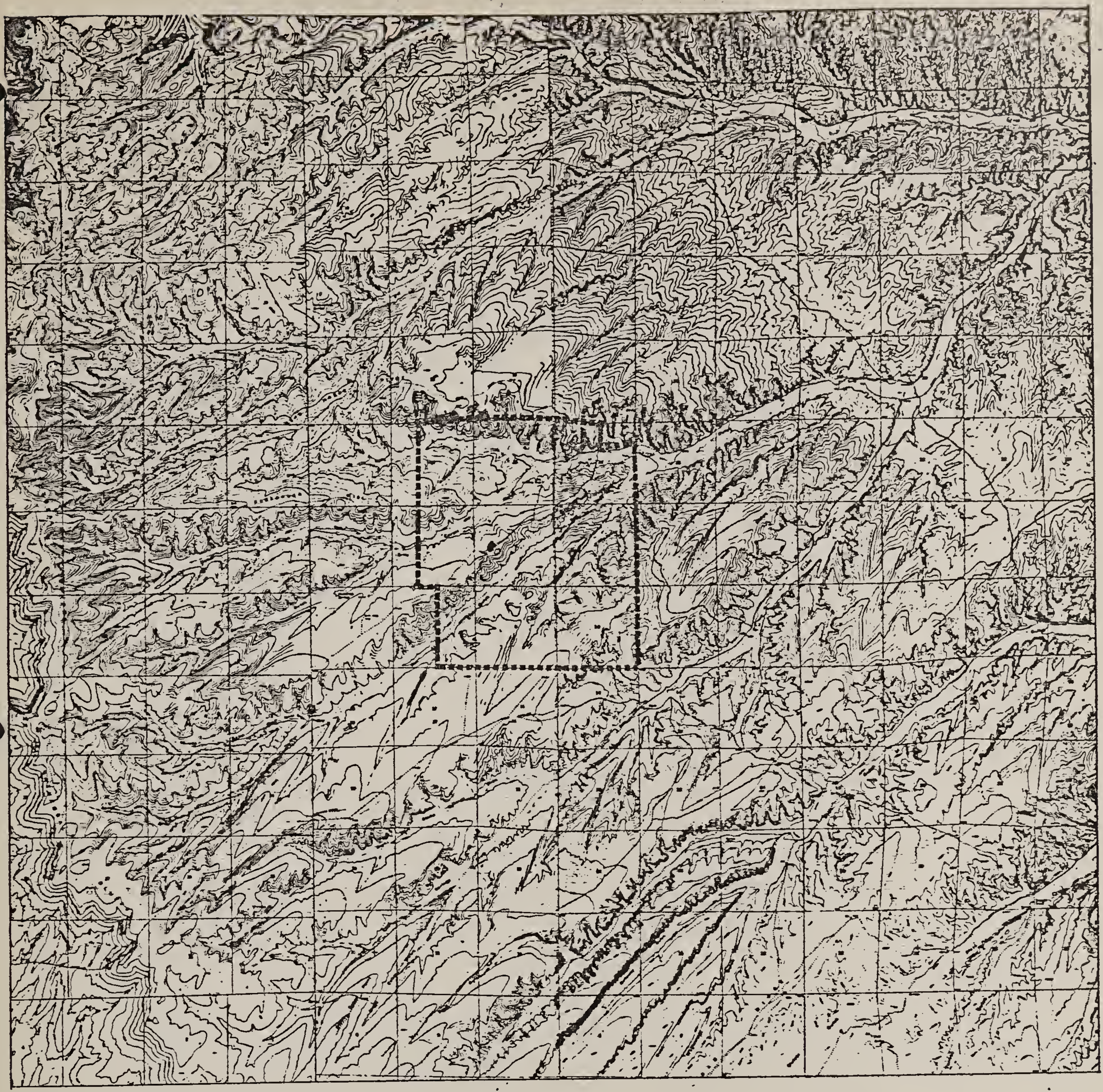
Other Information* ____

Observer Van Horn

* Include any distinguishing field marks for horses.

1b

FIELD OBSERVATIONS



Species Sylvilagus sp. Date 10/12/77 Time —

Means of Identification obs

Number Observed 1 ♂ ♀

Adult Juv.

Habitat —

Other Information*

Observer Van Horn

* Include any distinguishing field marks for horses.

M.1.1-3
1 C

FIELD OBSERVATIONS

Species Sylvilagus sp. Date 10/14/74 Time —

Means of Identification Obs

Number Observed 1 ♂ ____ ♀ ____

Adult X Juv. ____

Habitat Pinon - Juniper

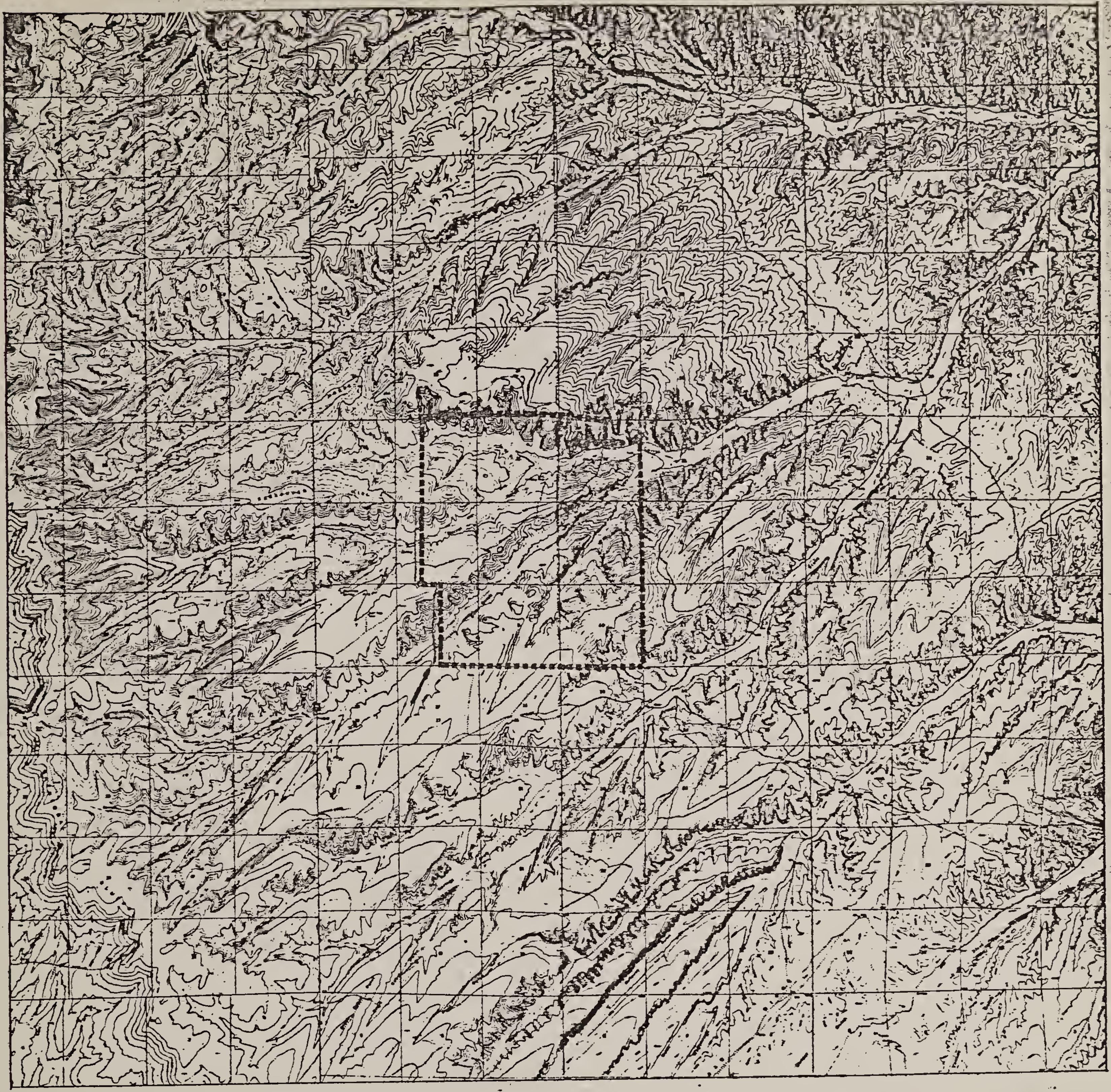
Other Information* ____

Observer JB

* Include any distinguishing field marks for horses.

M.H.P. 4
3a

FIELD OBSERVATIONS



Species Sylvilagus sp. Date 12/7/74 Time 11:00 AM.

Means of Identification observation

Number Observed 1 ♂ ______ ♀ ______

Adult ✓ Juv. ______

Habitat Piñon juniper

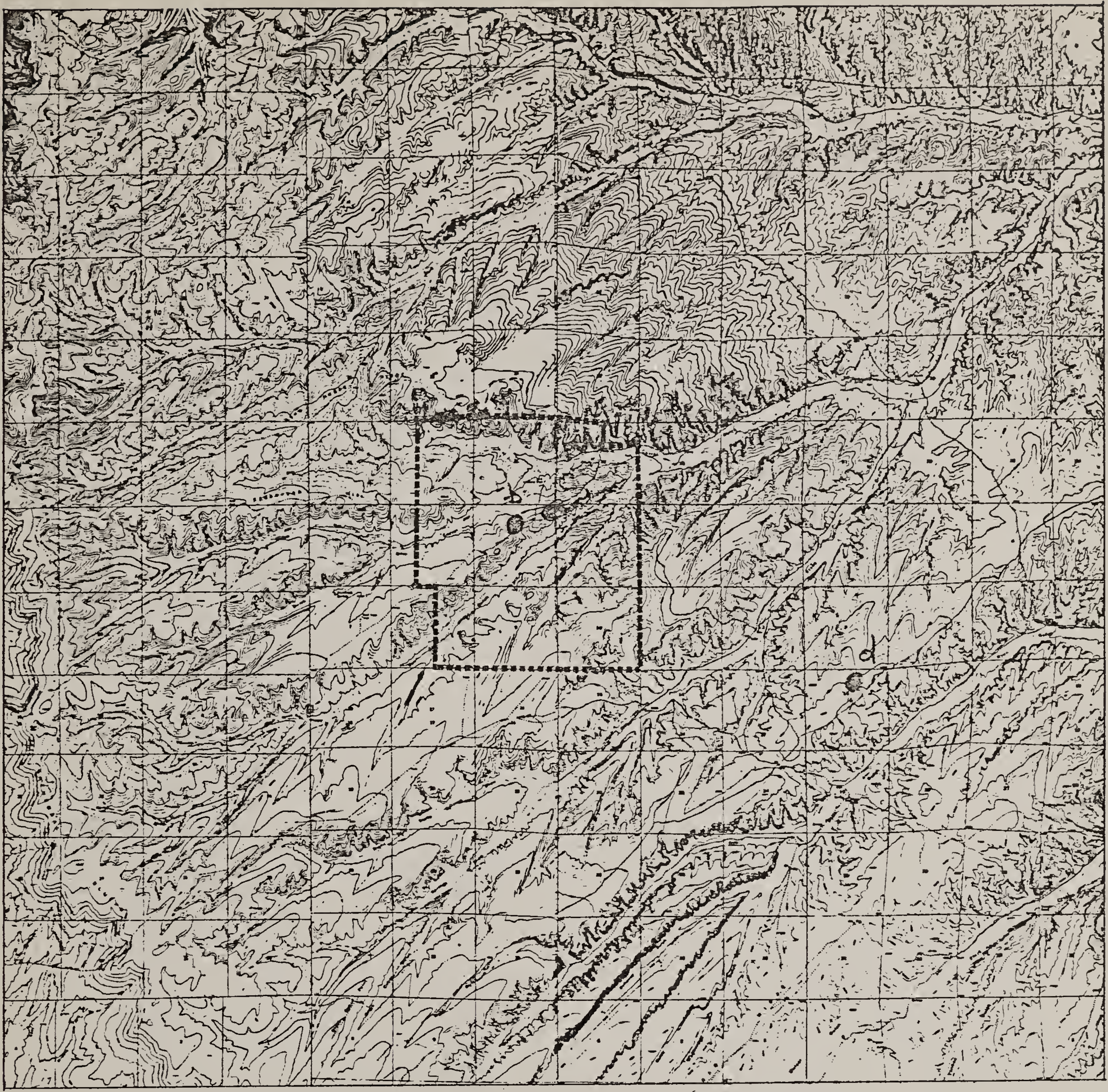
Other Information* ______

Observer J.C. & R.M.

* Include any distinguishing field marks for horses.

3 b, c, d

FIELD OBSERVATIONS



Species Cottontail Rabbit Date Dec. 7, 1974 Time 4:00 pm

Means of Identification tracks

Number Observed several for each dot, ♂ ♀

Adult ✓ Juv.

Habitat P.J.

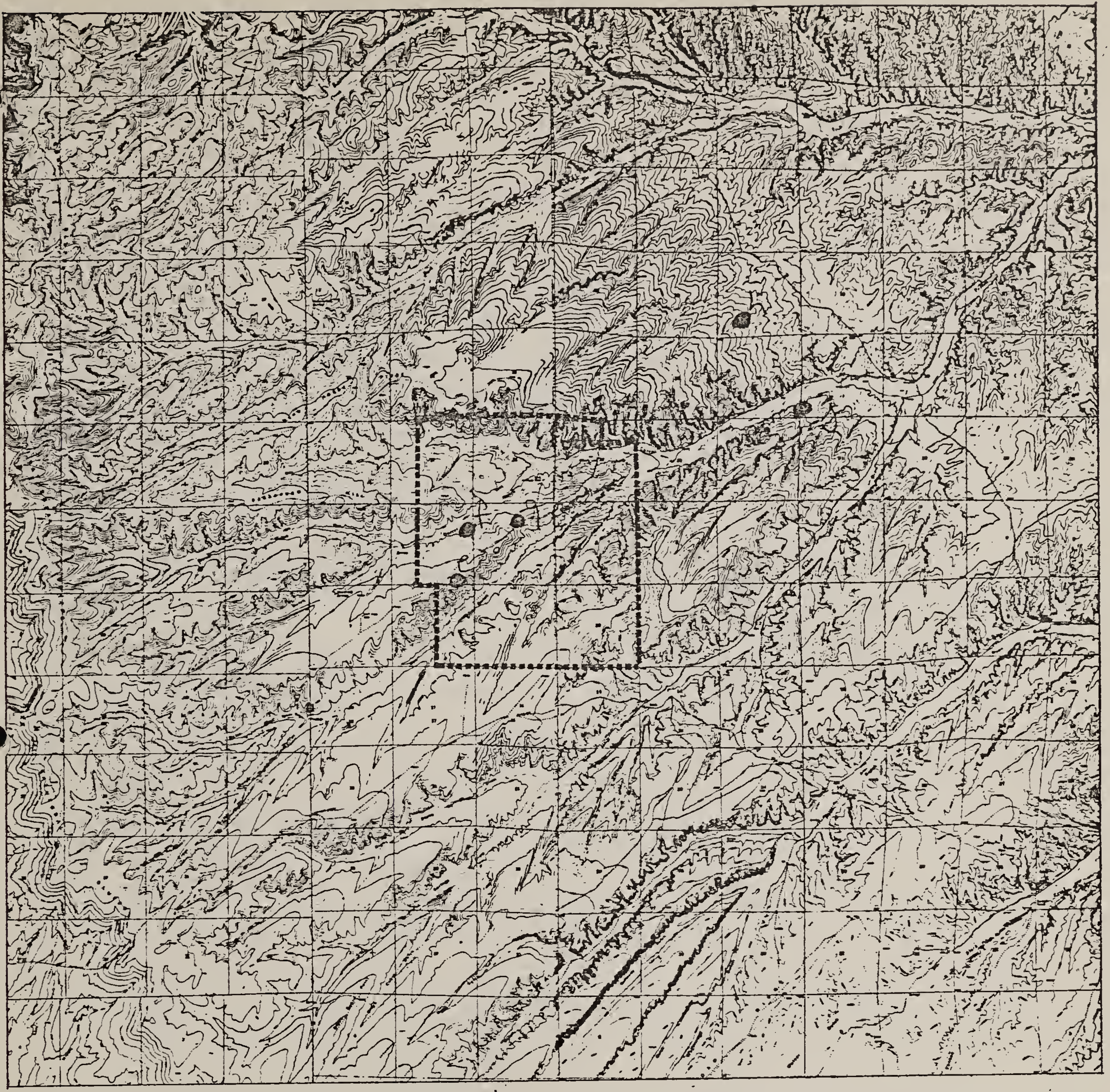
Other Information*

Observer Sing

* Include any distinguishing field marks for horses.

3 e, f, g, h, i, j

FIELD OBSERVATIONS



Species Cottontail Rabbit Date Dec 8, 1974 Time 9:30

Means of Identification tracks

Number Observed several sets of tracks ♂ ____ ♀ ____

Adult ✓ Juv. ✓

Habitat upland sage

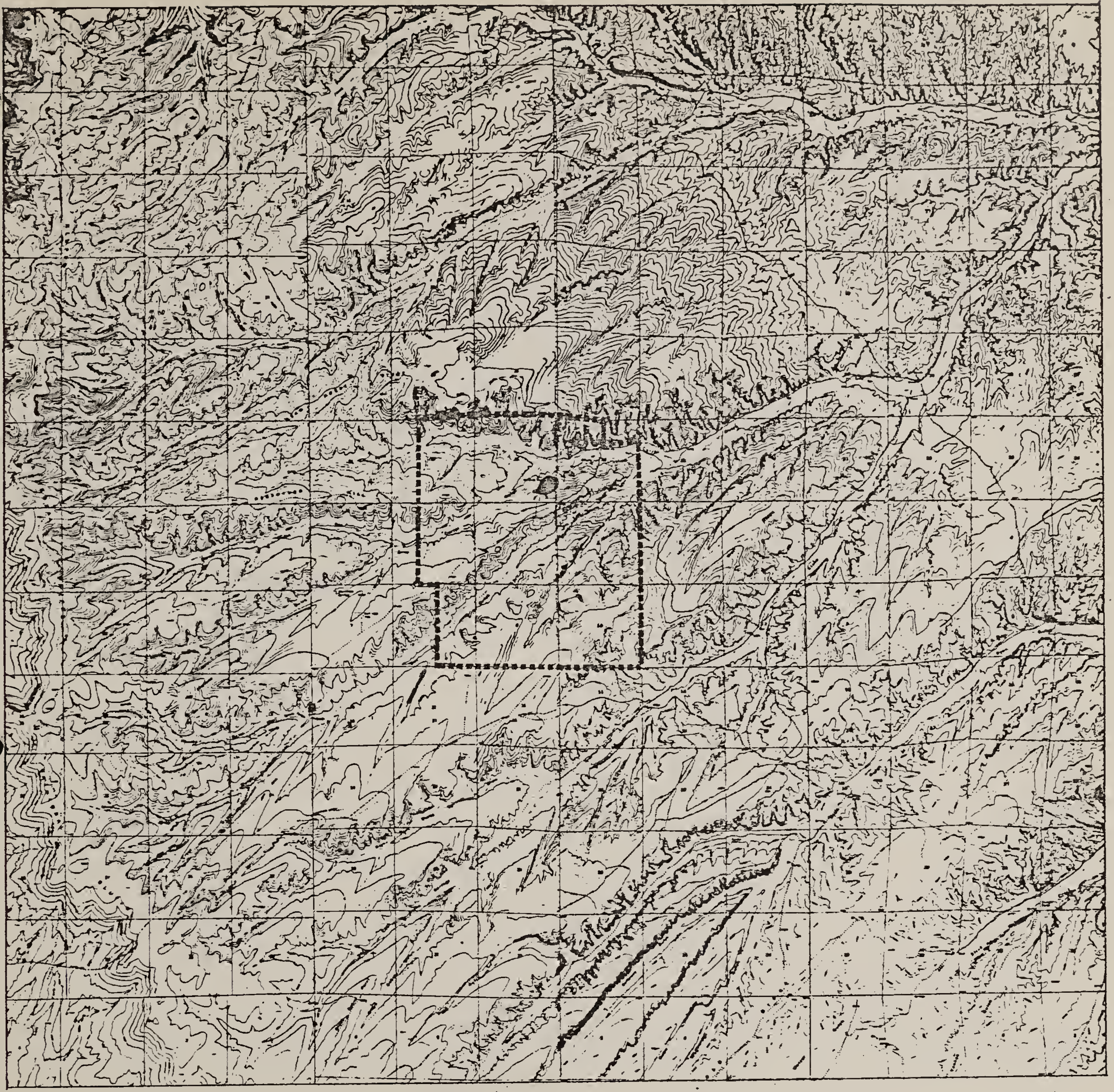
Other Information*

Observer Sany

* Include any distinguishing field marks for horses.

3K

FIELD OBSERVATIONS



Species Sylvilagus sp. Date 12/9/76 Time 1200

Means of Identification Tracks

Number Observed 1 set ♂ ______ ♀ ______

Adult ______ Juv. ______

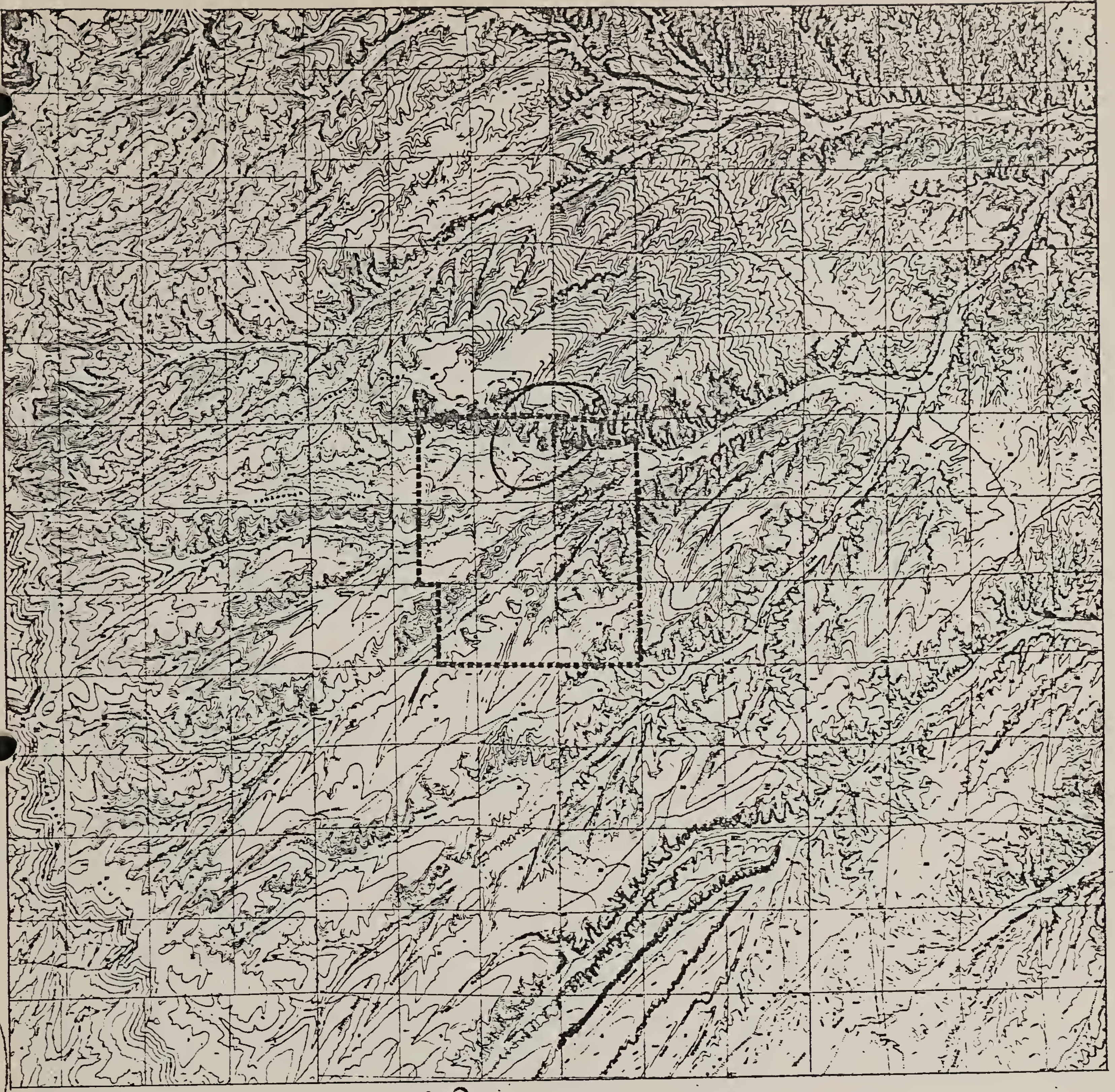
Habitat Rabbit brush

Other Information* ______

Observer JC D.A

* Include any distinguishing field marks for horses.

FIELD OBSERVATIONS



Species Sylvilagus sp. Date 12/9/74 Time 10:45 AM

Means of Identification Observation

Number Observed 1 ♂ ♀

Adult ✓ Juv.

Habitat Pinon Juniper

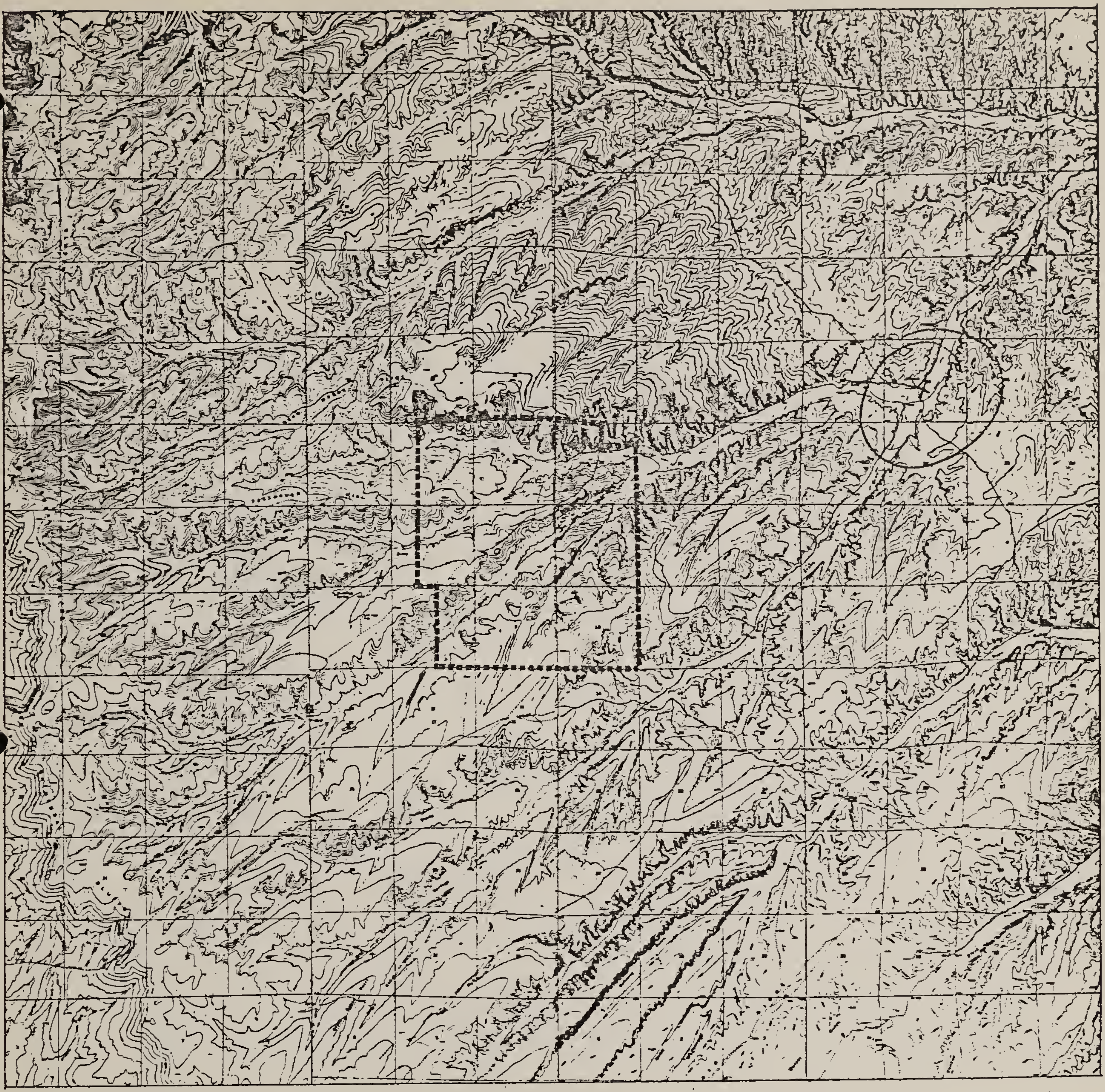
Other Information* South P-J, live trap plot

Observer

* Include any distinguishing field marks for horses.

3 m

FIELD OBSERVATIONS



Species Sylvilagus spp Date 12/9/74 Time 16 45

Means of Identification visual - roadside

Number Observed 1 (one) ♂ unknown ♀ unknown

Adult ✓ Juv.

Habitat

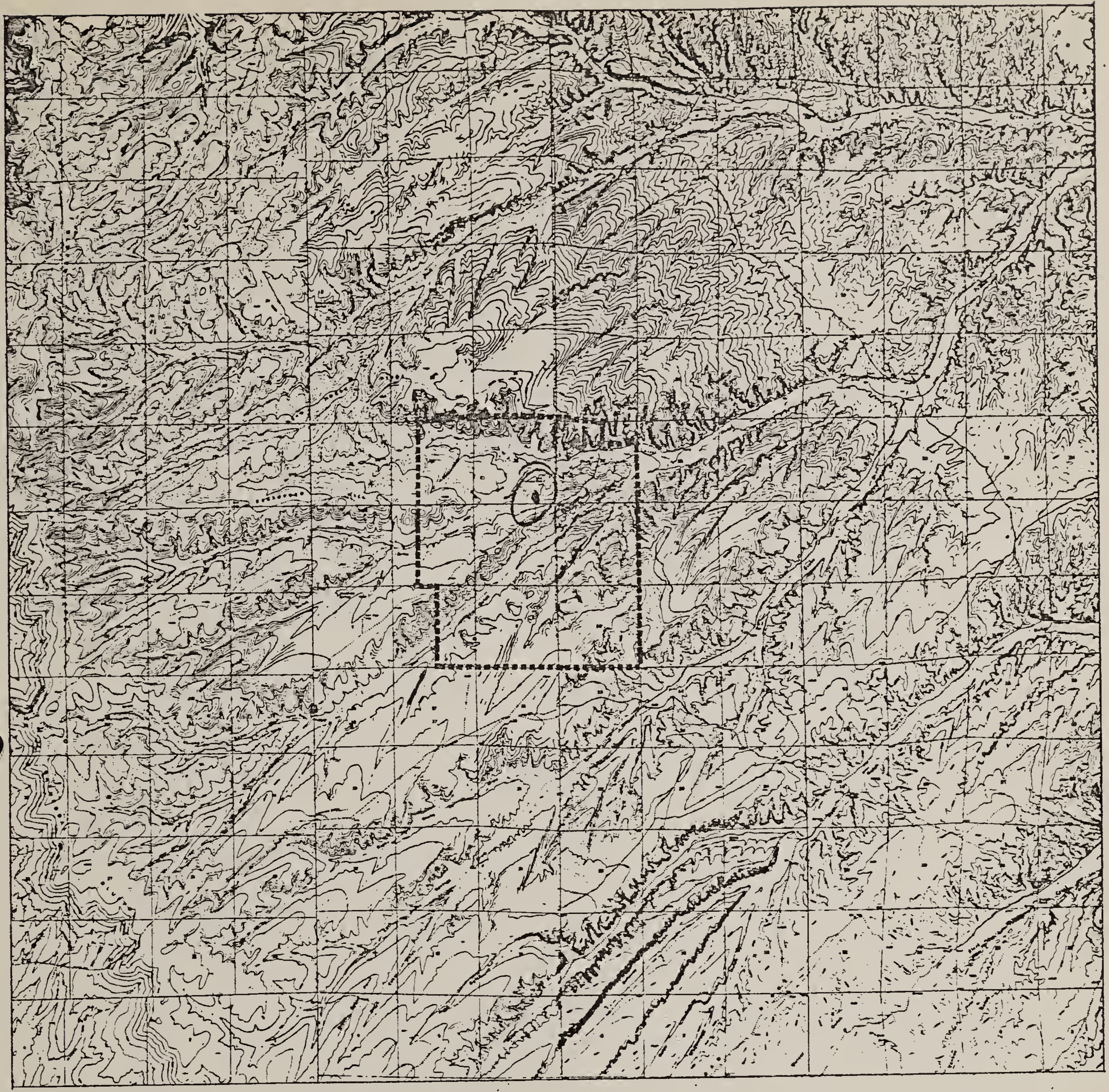
Other Information* Near corral at 84 ranch

Observer JBS & RDM

* Include any distinguishing field marks for horses.

FIELD OBSERVATIONS

5b



Species Sylvilagus sp. Date 2/10/75 Time 1100

Means of Identification sight

Number Observed 1 ♂ ♀

Adult Juv.

Habitat Pinon - Juniper

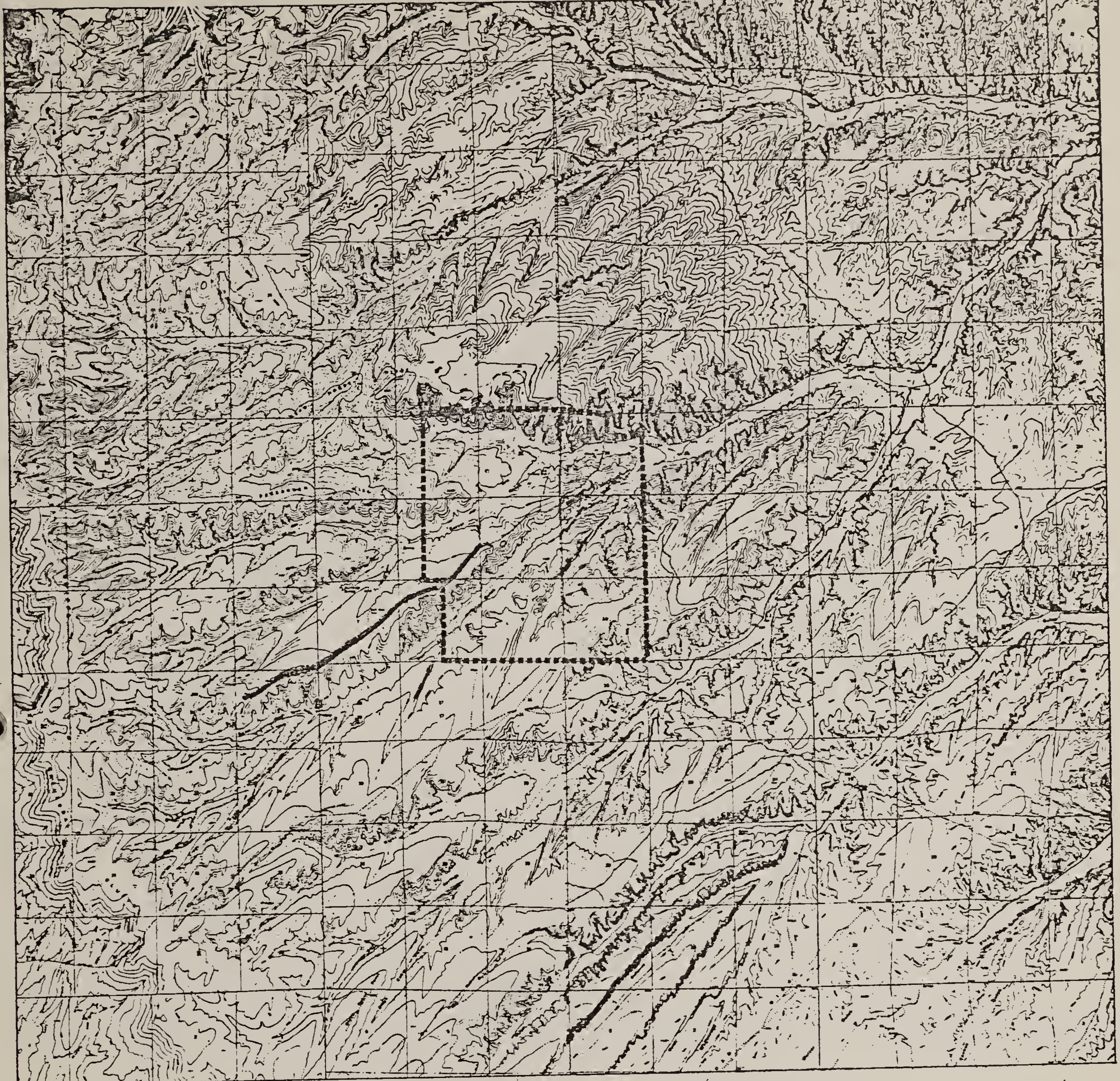
Other Information* durring lagomorph survey

Observer Lanz, Baker

* Include any distinguishing field marks for horses.

5a

FIELD OBSERVATIONS



Species Sylvilagus spp. Date 2/8-14/75 Time ____________

Means of Identification tracks

Number Observed ____________ ♂ ________ ♀ ________

Adult ________ Juv. ________

Habitat Pinon-Juniper (at these elevations seemed

Other Information* to avoid open sage areas)

this is probably S. nuttalii. Both S. nuttalii and

S. audubonii most likely occur ~~higher~~ at lower elevations

Observer Baker

* Include any distinguishing field marks for horses.

1a

FIELD OBSERVATIONS

Species White-tail'd jack rabbit Date 10/11/79 Time –

Means of Identification Obs

Number Observed 1 ♂ ♀

Adult Juv.

Habitat

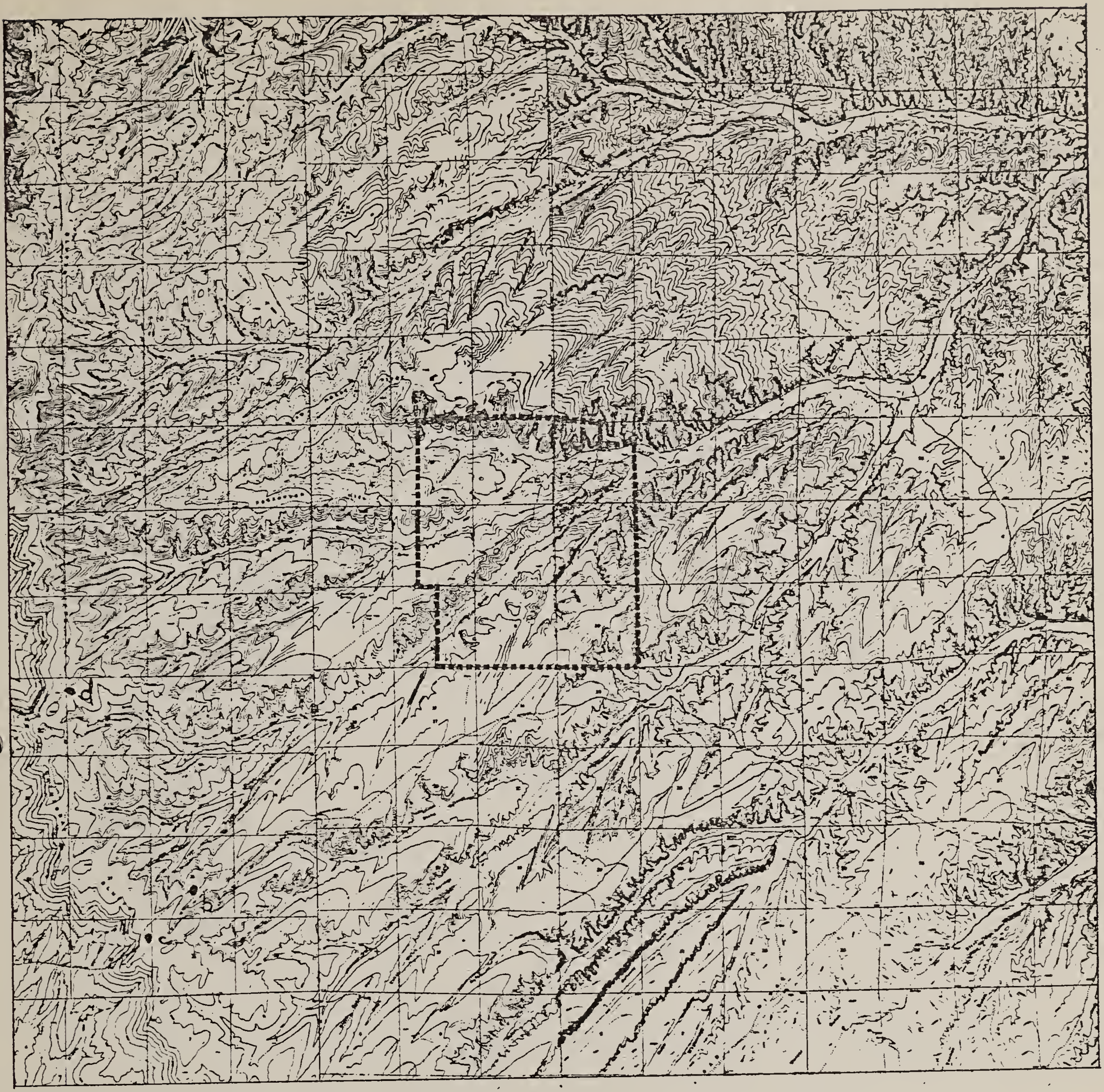
Other Information*

Observer SLE, EK

* Include any distinguishing field marks for horses.

FIELD OBSERVATIONS

1- b, c, d



Species Lepus townsendii Date Oct 12 Time –

Means of Identification direct obser

Number Observed 3 ♂ – ♀ –

Adult – Juv. –

Habitat

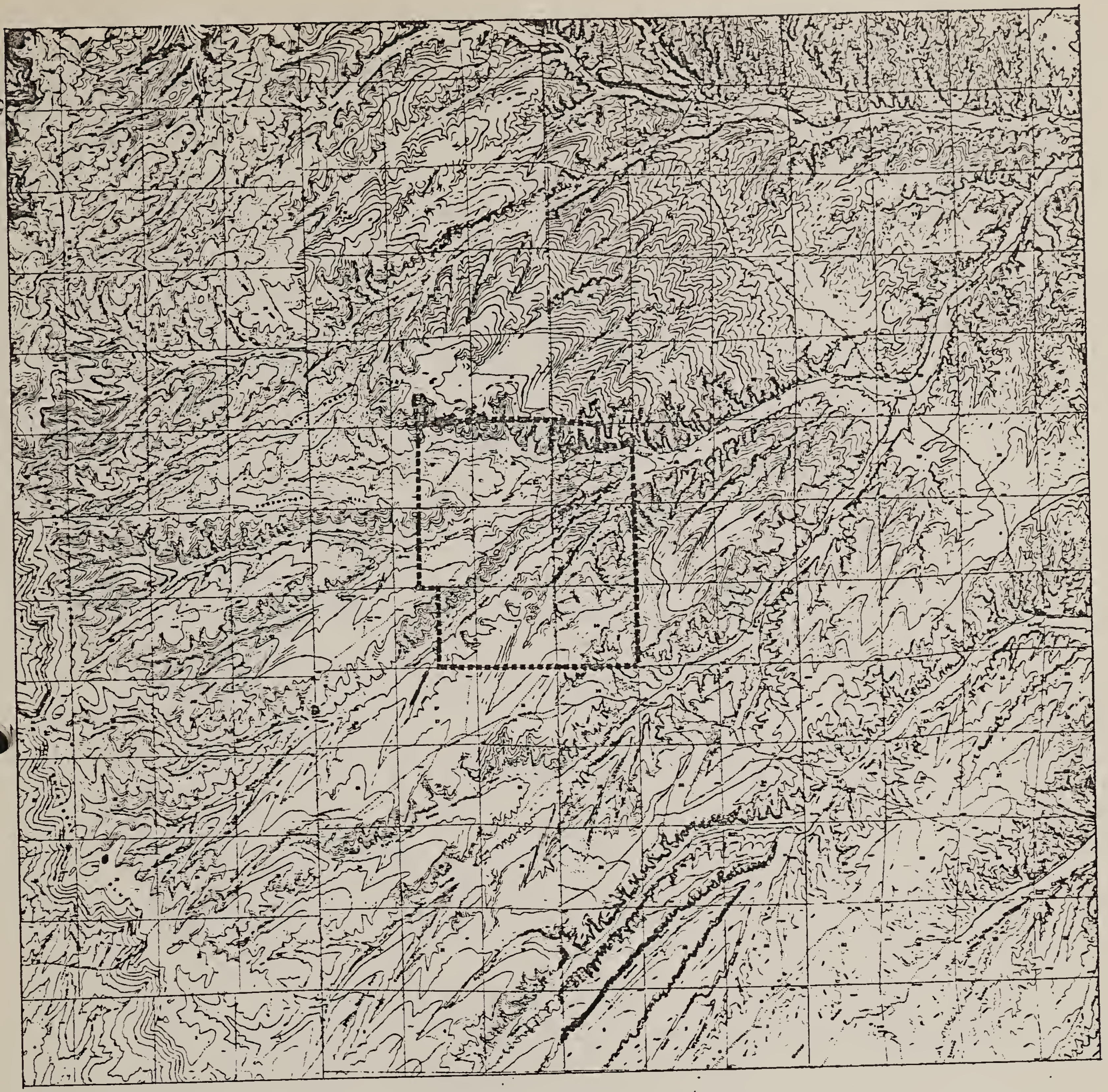
Other Information*

Observer E. Kelly

* Include any distinguishing field marks for horses.

1e

FIELD OBSERVATIONS



Species White Tailed Jack Rabbit Date 10/11/74 Time –

Means of Identification obs

Number Observed 1

♂ ________ ♀ ________

Adult ________ Juv. ________

Habitat ________

Other Information* ________

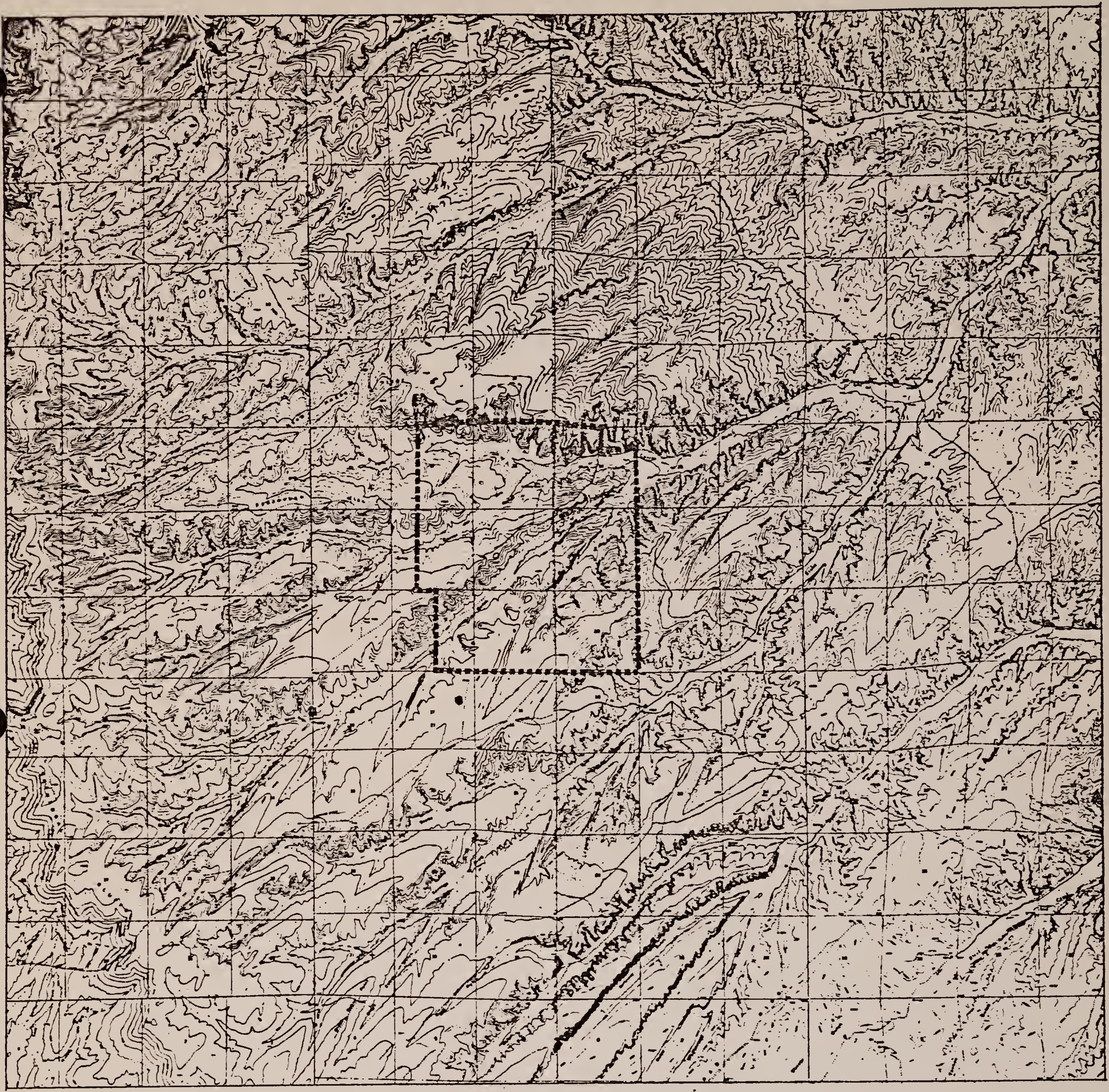
____

Observer JC EK

* Include any distinguishing field marks for horses.

1 f

FIELD OBSERVATIONS



Species Lepus townsendii Date Oct 21 Time —

Means of Identification direct. obser.

Number Observed 1 ♂ – ♀ –

Adult — Juv. –

Habitat

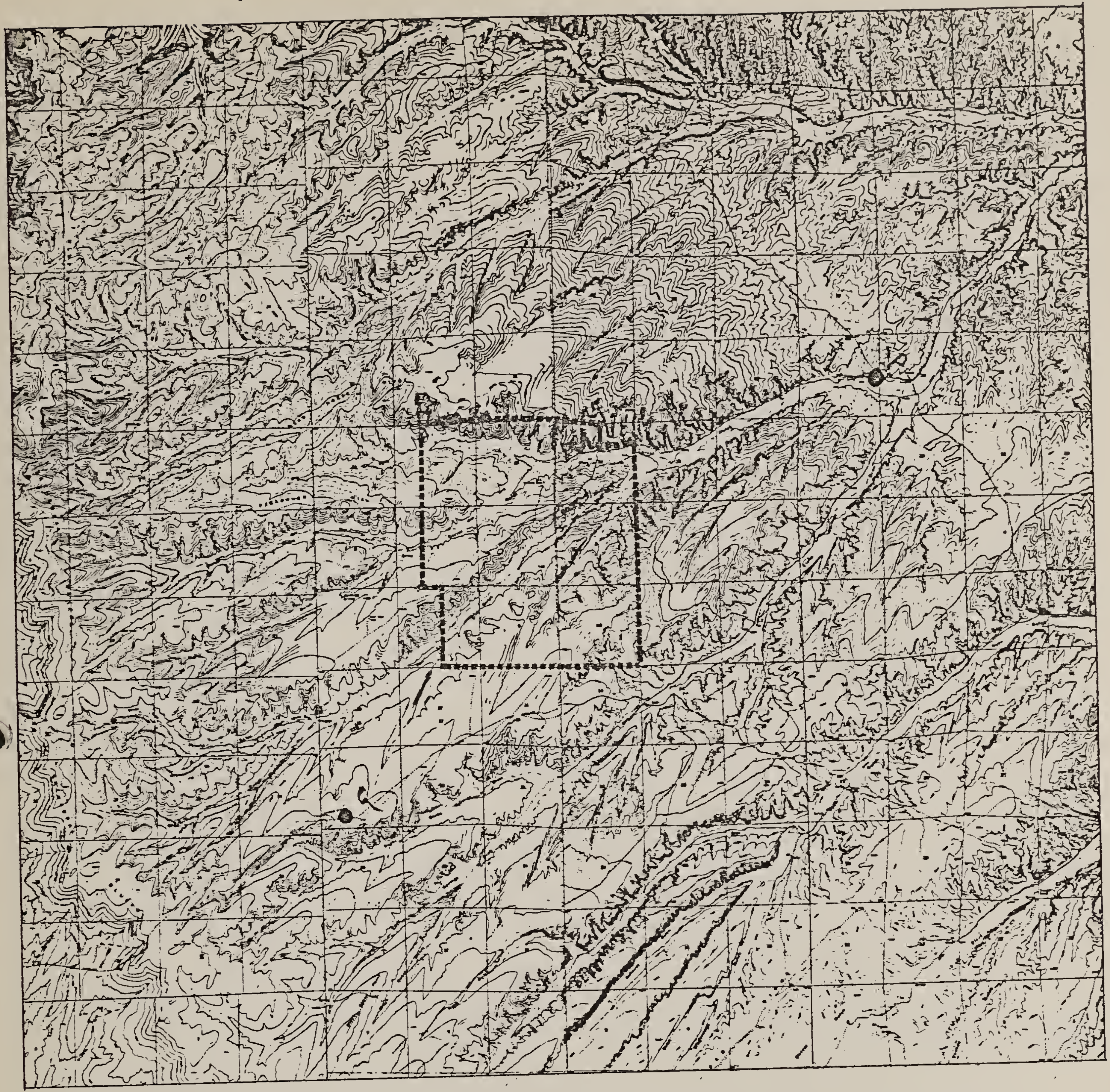
Other Information*

Observer S. Ellenwood

* Include any distinguishing field marks for horses.

2a, b

FIELD OBSERVATIONS



Species white-tailed jack Date Nov - 74 Time ——

Means of Identification observation - both in winter pellage

Number Observed 2

♂ ____ ♀ ____

Adult ✓ Juv. ____

Habitat low sage ; tall sage

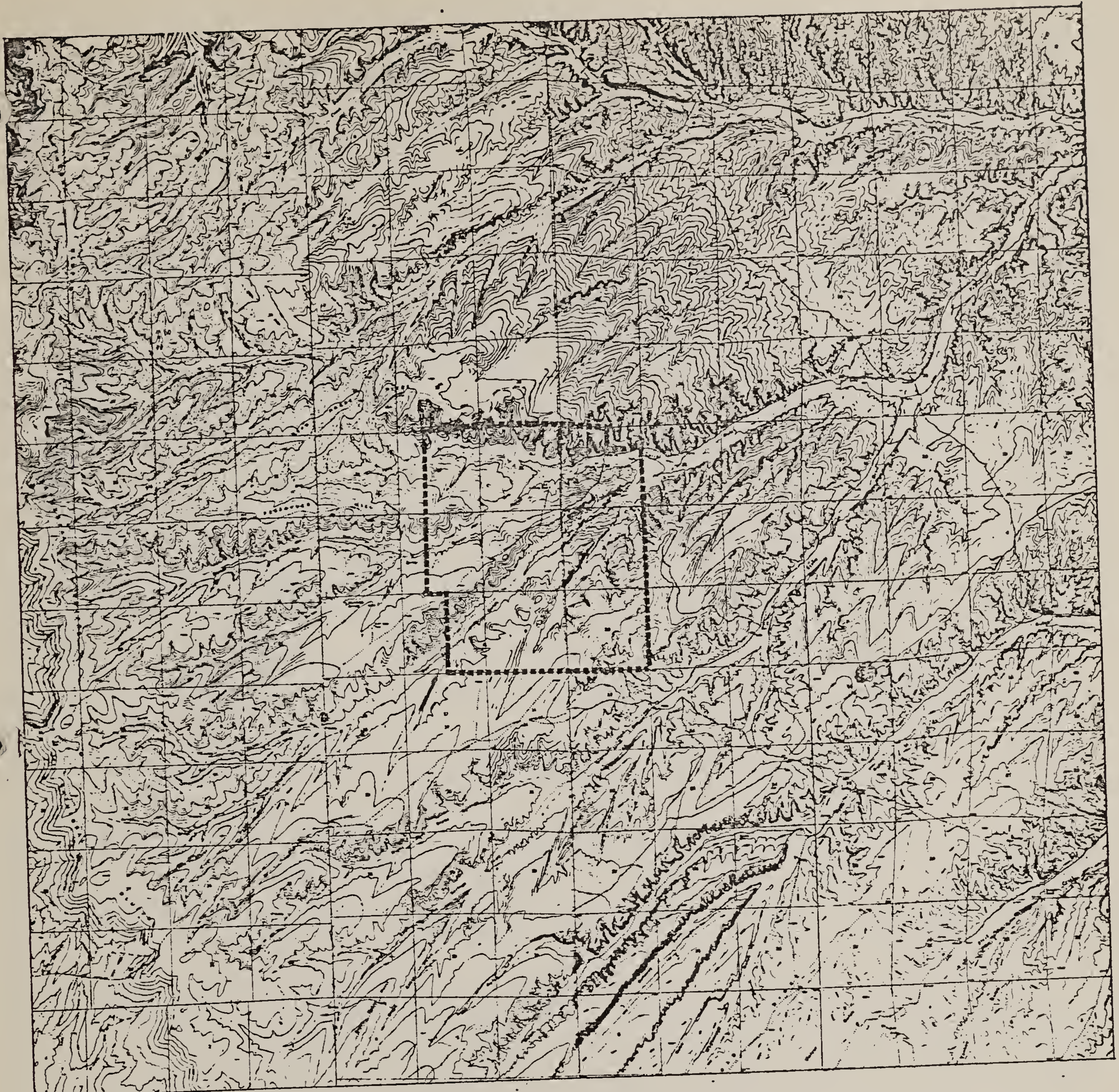
Other Information* ____

Observer Sanz

* Include any distinguishing field marks for horses.

3a

FIELD OBSERVATIONS



Species Jackrabbit (prob. white tail) Date Dec 7, 1974 Time 4:00

Means of Identification tracks (distance between tracks 14 feet

Number Observed 1 ♂ ____ ♀ ____

Adult ✓ Juv. ____

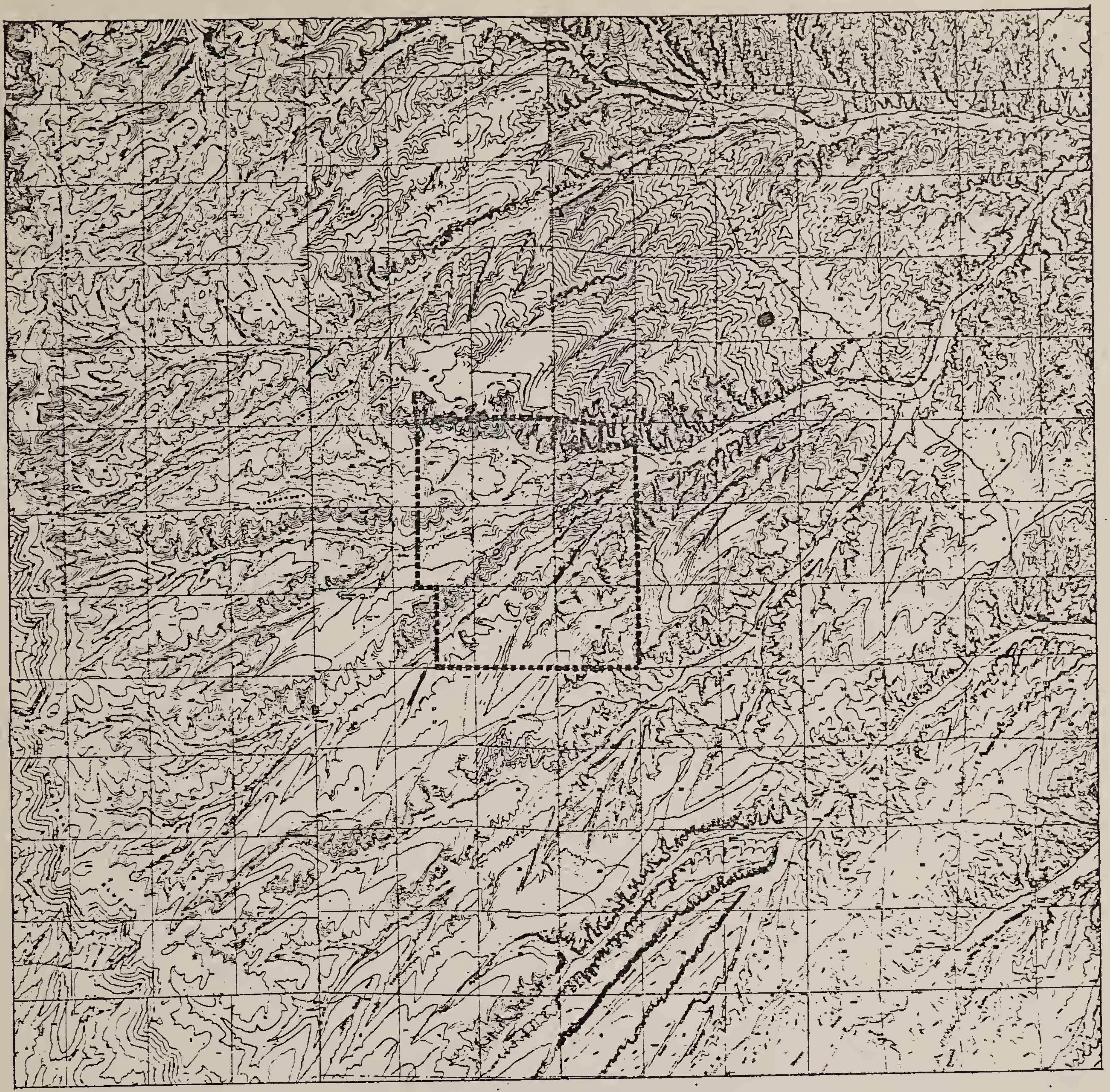
Habitat P.J. (in cath road P.J. grid.)

Other Information* - Two dens on this grid.

Observer Sonny

* Include any distinguishing field marks for horses.

FIELD OBSERVATIONS



Species White tailed jack rabbit Date Dec 8, 1974 Time 9:30

Means of Identification tracks

Number Observed several sets of tracks ♂ ♀

Adult Juv.

Habitat upland sage

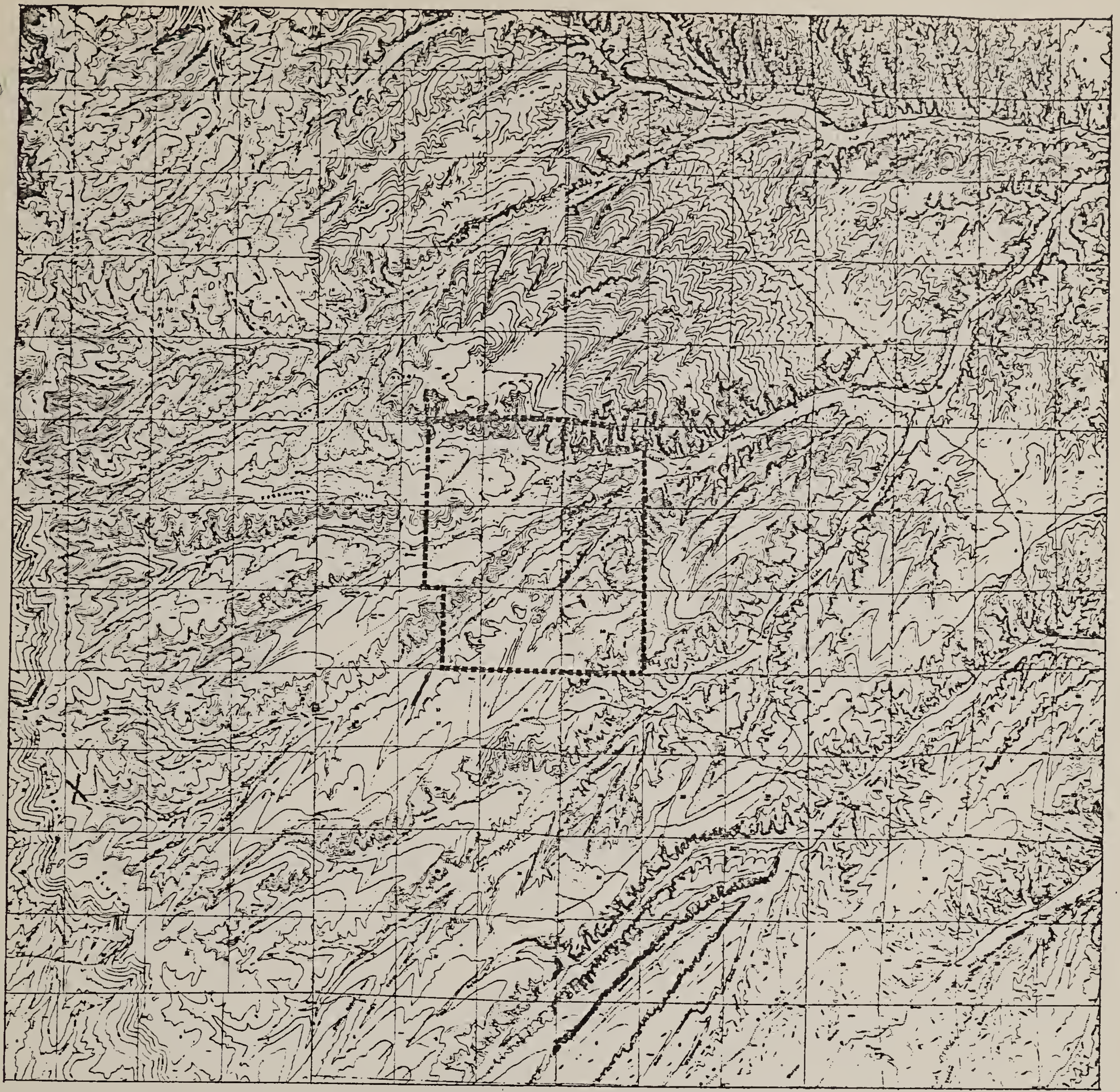
Other Information*

Observer Sonz

* Include any distinguishing field marks for horses.

14.1.1 - 74
3c

FIELD OBSERVATIONS



Species white-tailed jackrabbit Date 12/3/74 Time 1130

Means of Identification tracks

Number Observed 1 ♂ ____ ♀ ____

Adult ____ Juv. ____

Habitat Mixed Brush

Other Information* ON Mixed Brush Grid

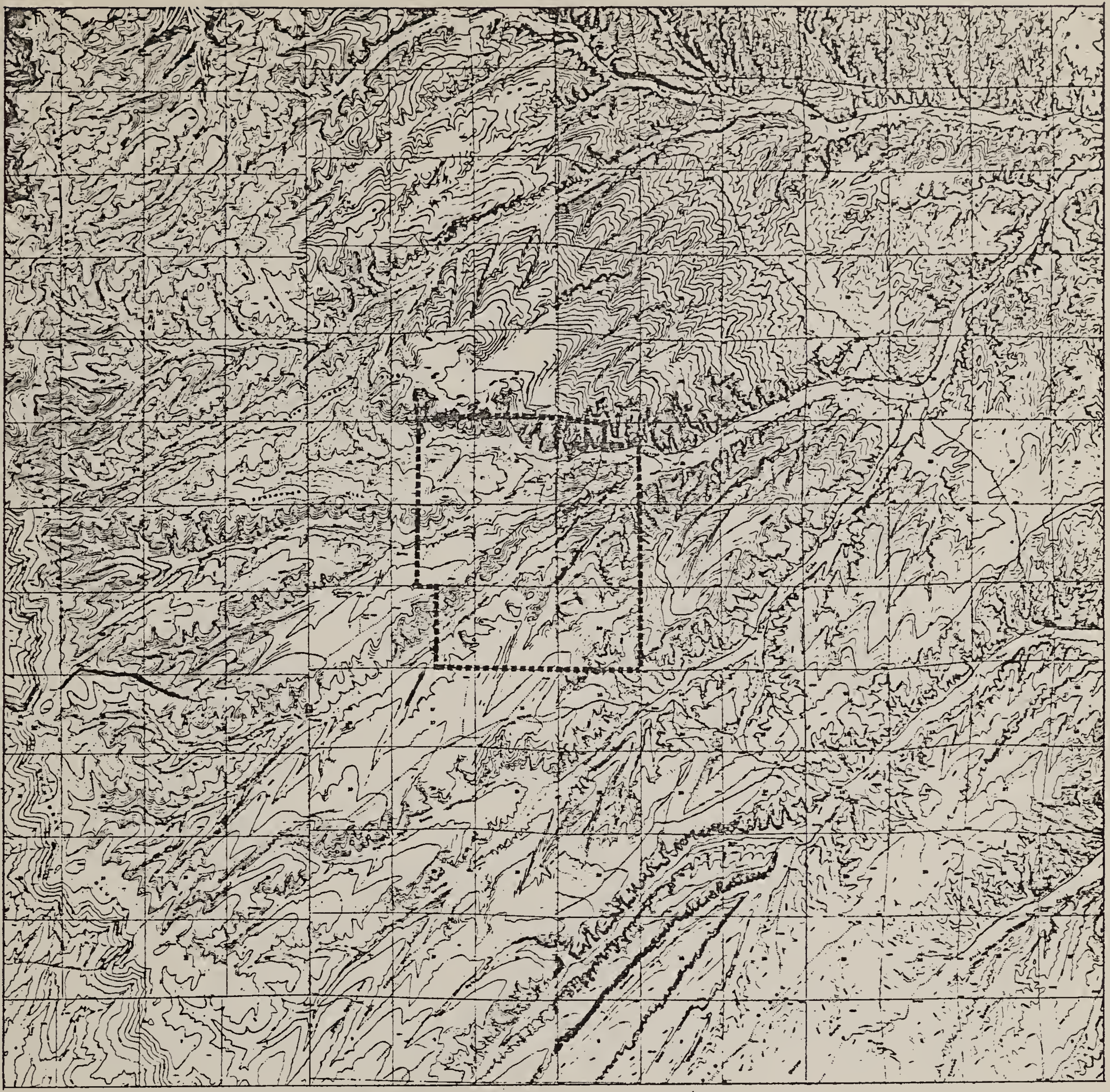
Observer Turner

* Include any distinguishing field marks for horses.

14.1.1-20

5a

FIELD OBSERVATIONS



Species Jack Rabbit Date 2/8-11/75 Time

Means of Identification tracks in snow

Number Observed ♂ ♀

Adult Juv.

Habitat open sage habitats at higher elevations

Other Information* than cottontails

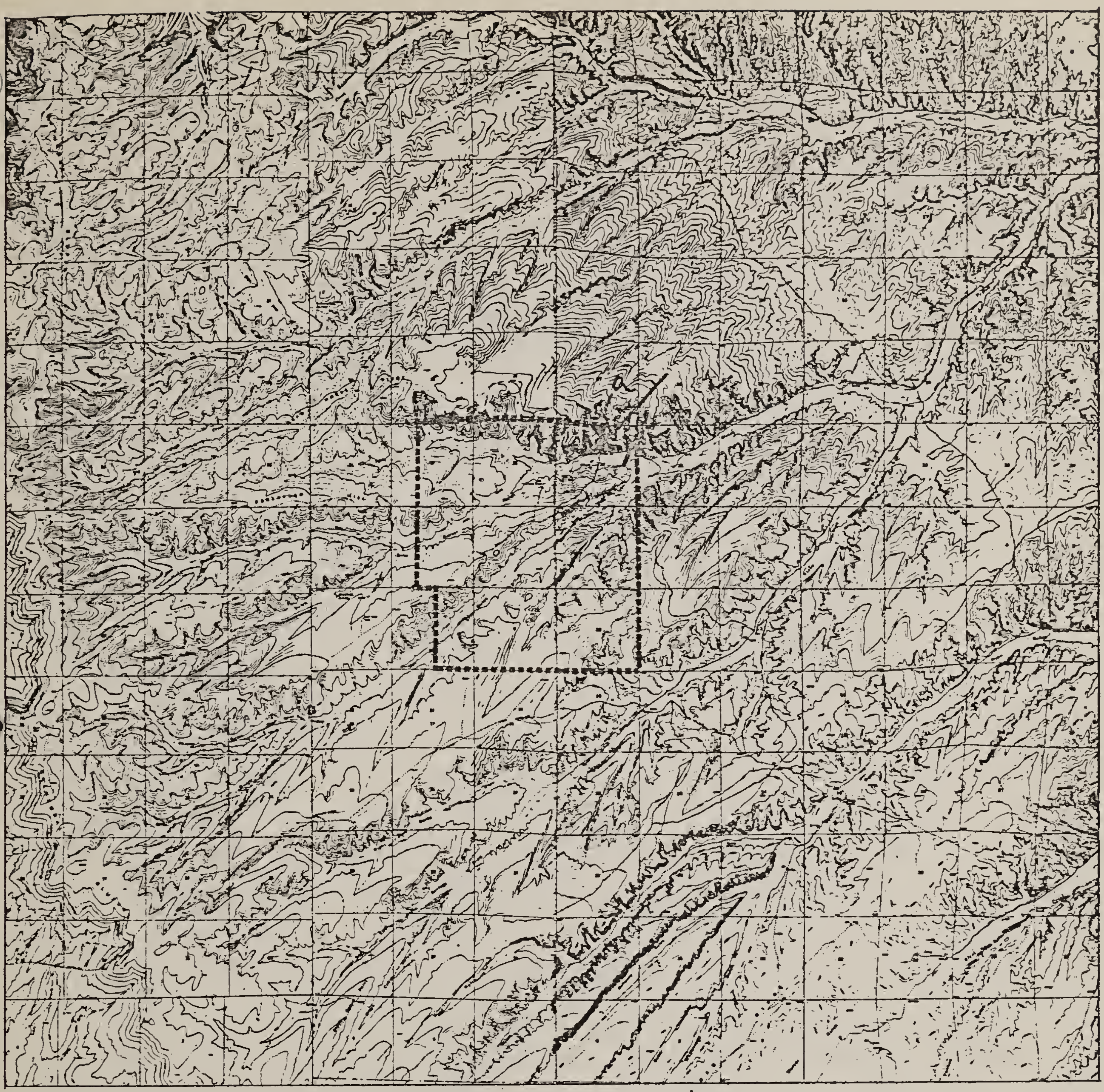
Observer Baker

* Include any distinguishing field marks for horses.

94:1.5-23
21

1- a, b

FIELD OBSERVATIONS



Species Erethizon dorsatum Date 10/24 Time —

Means of Identification direct ⓐ obser. + sign ⓑ (gnawed tree)

Number Observed 1 ♂ ______ ♀ ______

Adult X Juv. ______

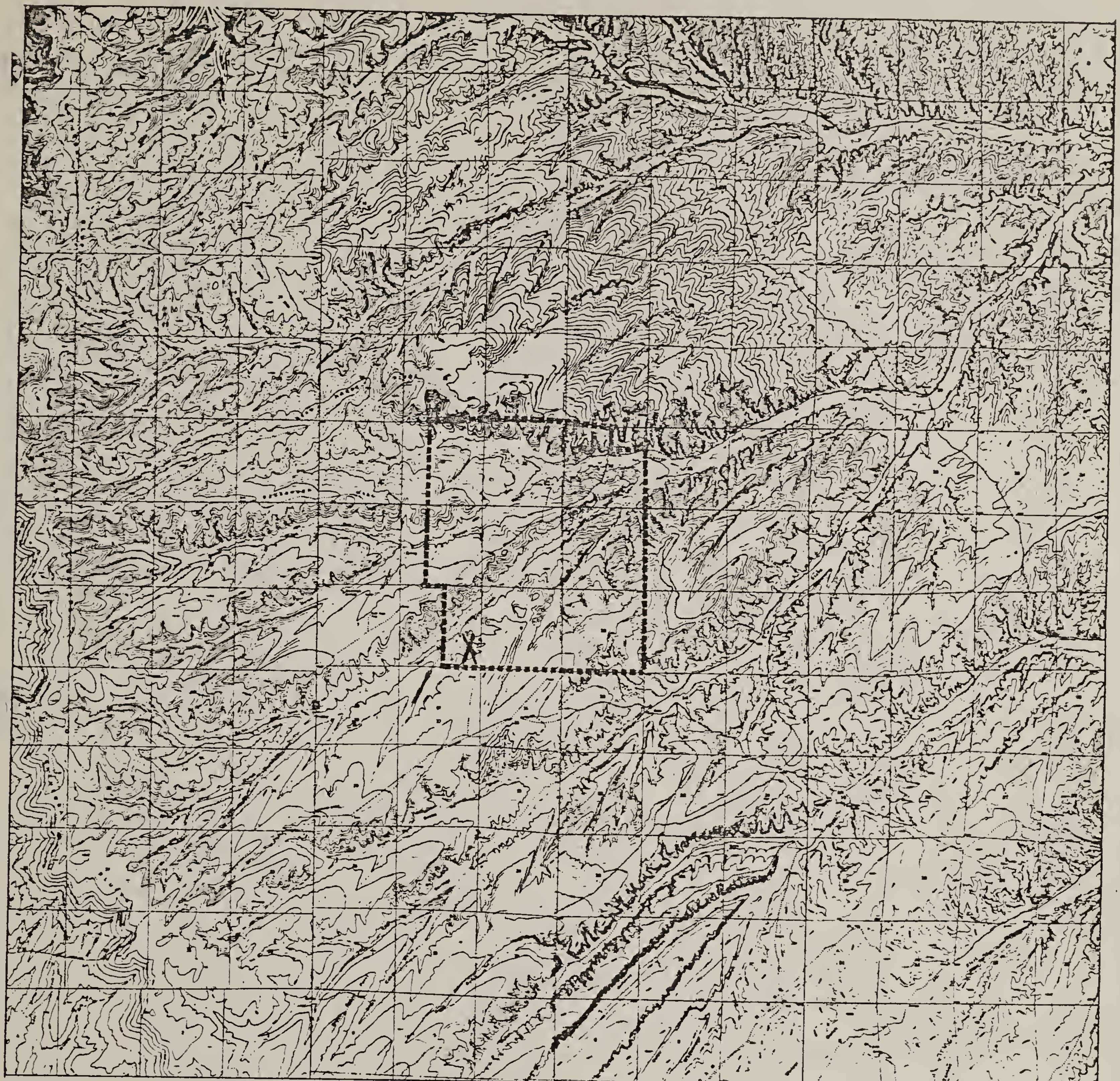
Habitat Pin-Jun south slope (M-13 of grid B)

Other Information* numerous droppings under tree where located

Observer JC, JB.

* Include any distinguishing field marks for horses.
norses.

FIELD OBSERVATIONS



Species Northern Pocket Gopher Date 10/10/74 Time —

Means of Identification sign (fresh mounds, 10-12)

Number Observed ____ ♂ ____ ♀ ____

Adult ____ Juv. ____

Habitat Sage (Sage grid (D))

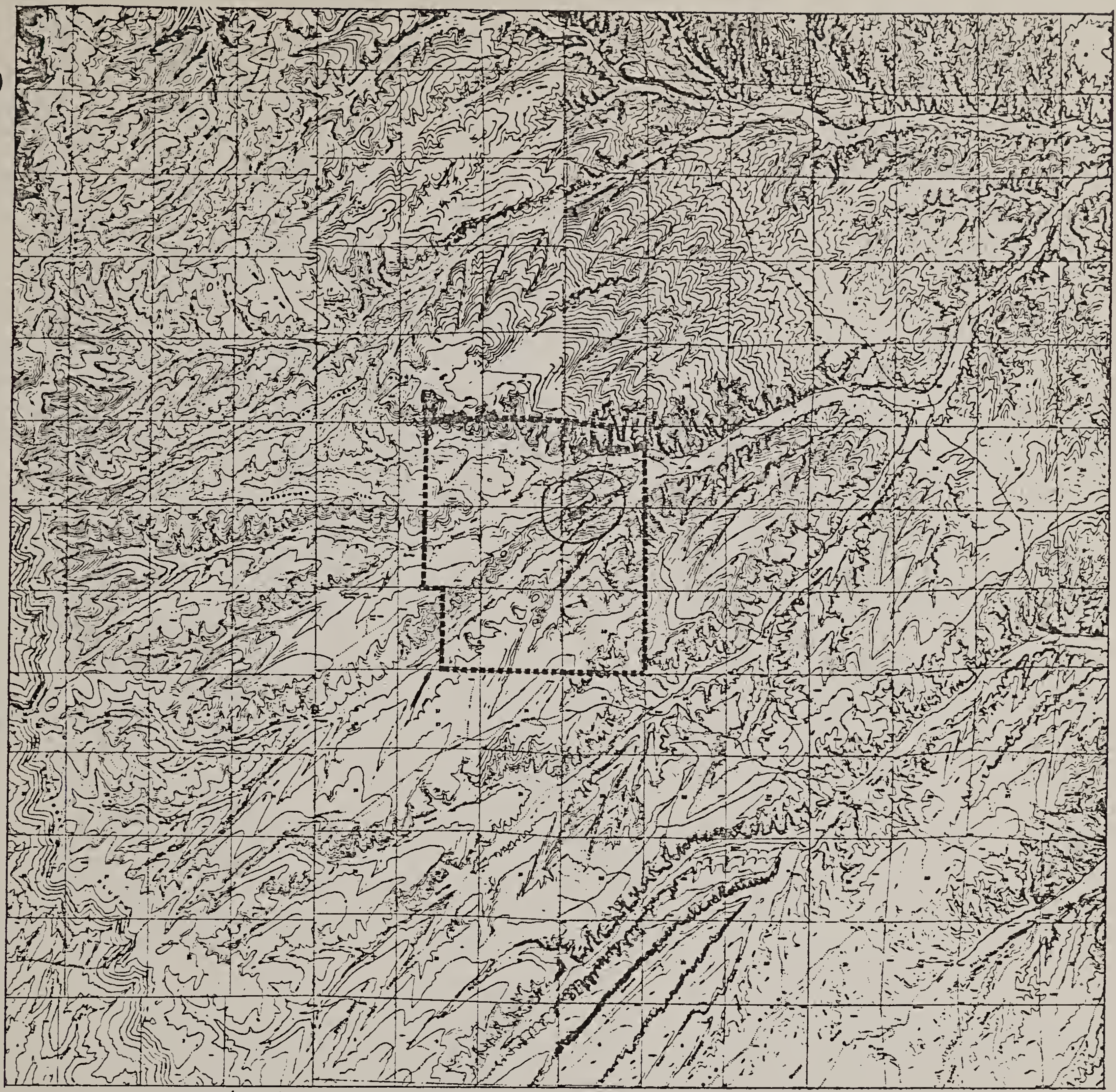
Other Information* ____

Observer S G Martin

* Include any distinguishing field marks for horses.

14.1.1-25

FIELD OBSERVATIONS



Species Bushy-tailed wood rat & possible raptor nest location Date 12/10/74 Time 1500

Means of Identification visual

Number Observed

NA { ♂ ♀ Adult Juv.

Habitat cliff.

Other Information* guano deposits — possible rats &/or bat nest, & possibly raptor. up box elder gulch ~ ½ mile beyond drill pad

Observer SE RDM RS

* Include any distinguishing field marks for horses.